FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

No. 29,565 — Monday March 4 1985 — D 8523 B

The market's view of currency rates, Page 22

World news

N. Ireland Assembly to debate security

The Northern Ireland Assembly has been recalled for an emergency debate on security today, following the killing of the eleventh member of the security forces in four days.

Royal Ulster Constabulary Sergeant Hugh McCormack, a Catholic, was shot dead outside a church in Co Fermanagh.

Douglas Hurd, the Secretary of State for Ulster, confirmed that the British and Irish governments were discussing ways of formalising the Republic's contribution to the Ulster solution. Page 5

Walesa protest

Solidarity leader Lech Walesa said he would join in protests today at the Gdansk shipyard where he works if the labour force wanted to demonstrate its discontent with state-ordered food prices due to start taking effect then. Page 2

Bangladesh ban

Police cordoned off the homes of Bangladesh's two top opposition leaders, Begum Khaleda Zia and Sheik Hasina Wazed, after President Hossain Mohammed Ershad reimposed martial law and banned political activity.

Kuwait reshuffle

A Cabinet reshuffle in Kuwait brought eight new faces among 15 ministers with changes made in key economic posts. Foreign, defence and interior portfolios stayed in the hands of the incumbents.

French held hostage

The five-man crew of a French Air Force transport plane taking part in an international famine relief operation in Ethiopia was taken hostage by rebels north of Addis Ababa.

E. Germans win visas

Many of the East Germans who sought refuge in West German embassies last year to press for the right to emigrate have now been granted exit visas, the Bonn Government said.

Iran frees POWs

Iran freed 27 disabled Iraqi prisoners of war and flew them to Ankara, Iranian national newsagency reported.

Peruvian black-out

Maoist guerrillas in Peru destroyed a power pylon in the Andes, blacking out south Lima and three highland cities.

Pakistan poll deaths

Two men were killed and two wounded in a gun battle between police and a crowd protesting against alleged poll-rigging in Punjab province of Pakistan.

Gadaffi's "right"

Libyan leader Muammer Gadaffi defended his country's right to "liquidate" its opponents and attacked Arab leaders for visiting Washington.

Rain kills 15

Heavy rains killed 15 people in the Brazilian city of Rio de Janeiro, including a family of five. Twelve were crushed by mud and rock slides in slum areas and three swept away by floods.

FT writer held

FT correspondent Nora Boustany and Julie Flint of the Guardian newspaper were held for three hours when they walked into an Israeli ambush in southern Lebanon.

Biting the ballot

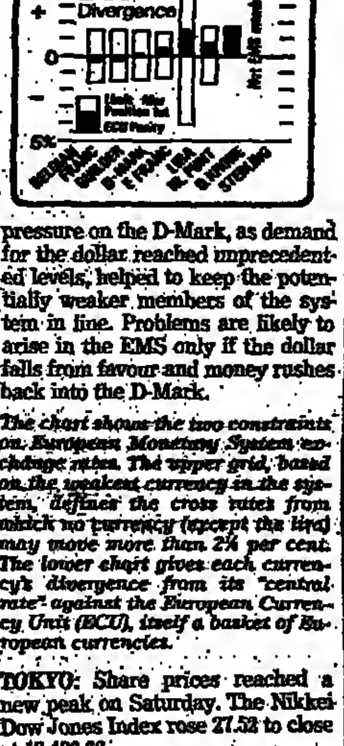
A man trying to cast his vote in Uttar Pradesh state election in India was bitten by a snake which slithered from the ballot box. The man finished voting before being rushed off for medical treatment.

Business summary

Coastal in $2.3bn U.S. oil group bid

COASTAL CORPORATION, the Houston-based energy group, will begin a $60-a-share cash tender offer for all the shares of American Natural Resources, a Detroit-based oil and gas group. The hostile bid, which had been expected, values American Natural Resources at $2.3bn. Page 22

EUROPEAN MONETARY SYSTEM was an island of calm in a raging sea of foreign exchange trading last week. There was very little change in the EMS, apart from a slight strengthening of the lira and Dutch guilder, and a marginal fall by the Danish krone and D-Mark. Selling pressure on the D-Mark, as demand for the dollar reached unprecedented levels, helped to keep the potentially weaker members of the system in line. Problems are likely to arise in the EMS only if the dollar falls from favour and money rushes back into the D-Mark.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

TOKYO: Share prices reached a new peak on Saturday. The Nikkei-Dow Jones Index rose 27.52 to close at 12,439.66.

MALAYSIA'S central bank governor, Tan Sri Aziz Taha, resigned. He is known to disagree with government banking and monetary policies. Page 2

SOVIET UNION is to build a 4,600km gas pipeline from Western Siberia to Eastern Europe. Construction will begin next year.

THREE of Britain's big clearing banks expect to report solid increases in 1984 profits, but a fourth, Midland, will suffer from losses sustained at its Crocker National Bank subsidiary in the U.S. Page 6

SOUTH AFRICA appointed a senior official to co-ordinate action against campaigns abroad for the withdrawal of investment from the country. Page 2

MONTEDISON, the Italian chemicals and health care group, received the surprise resignation of Mr John Sweeney, one of two principal managing directors, at the weekend. Page 22

OLIVETTI, Italy's leading data-processing equipment maker, has scrapped plans for a joint venture with Stet, the state-owned telecommunications and electronics holding company, in factory automation. Page 22

VOLVO, the Swedish motor and industrial group, has announced that a series of closely related companies will join in its latest move into the pharmaceuticals and biotechnology sector. Page 22

WELLA, the West German hair care company, increased its worldwide sales by 15 per cent to DM 1.63bn ($493m) last year. Page 22

KLÖCKNER-WERKE, the West German steel company, broke even in fiscal 1984, as resurgent processing division performance and extraordinary income overcame steel-sector losses. The company lost DM 139.7m ($41.7m) in 1983. Page 22

UK pit strike ends but union vows to fight on

BY JOHN LLOYD, INDUSTRIAL EDITOR, IN LONDON

THE UK miners' strike, one of the longest and among the most bitter in British history, will end tomorrow with an organised return to work by strikers. But Mr Arthur Scargill, president of the National Union of Mineworkers (NUM) said last night: "The dispute goes on."

The union's national delegate conference, which had been given the authority to decide the fate of the strike, voted by 98 to 91 yesterday to return to work without any agreement with the National Coal Board (NCB). Over half the NUM's 186,000 members are already at work and the conference was faced with the disintegration of the year-old strike.

Mr Scargill, after the three-hour meeting, said: "We will continue to fight pit closures and job losses and – make no mistake – don't underestimate this union's ability to fight pit closures and job losses.

"This union will continue to fight and if that means we have to consider taking action again then we shall do so."

The return to work tomorrow will be one day short of the anniversary of the NCB's publication of its plans to cut capacity by 4m tonnes a year and to close uneconomic pits. It was these plans which sparked the dispute, although the miners already had a ban on overtime in pursuit of a pay claim.

The NUM president said: "We faced not an employer but a government aided and abetted by the judiciary, the police and you people in the media. At the end of this time our people have suffered tremendous hardship."

Mr Scargill opened what is likely to be a savage internal battle within the labour movement over the failure of the strike. He identified as a reason for the return to work the fact that "the trade union movement in Britain, with a few notable exceptions, has left this union isolated. They have not carried out Trades Union Congress decisions, to their eternal shame." Organised support for the miners had come only from the rail and seamen's unions.

The return to work was decided on a motion proposed by the union's South Wales area – the most solid throughout the strike. The resolution was carried in preference to a motion from Yorkshire, the largest coalfield, which was voted down by 91 votes to 98. That called for the strike to be carried on until an amnesty for the 700 men dismissed during the strike was secured and the future of the miners in the five pits marked for closure was clarified.

Two other resolutions, from Kent and Scotland, were also voted down. The Kent resolution called for the "right to negotiate freely" with the coal board, while Scotland called for a return conditional on a general amnesty.

South Wales had, in the dying stages of the strike, taken a harshly realistic view – a view it believed it was entitled to because of its solidity.

Its motion accepted that there was now "a drift back of members to work in all areas, and that it had now become clear that the coal board have no intentions whatsoever to have any discussions with the union unless they sign the document presented by the TUC to the union on Sunday February 17." That document had been rejected by the NUM national executive.

South Wales called on the national executive to negotiate a national amnesty for those dismissed – but did not make it a condition of the end of the strike.

Mr Scargill vehemently opposed the motion, but other left-led regions, like North Derbyshire and the north eastern areas swung in behind.

Mr Ian MacGregor, the NCB chairman, said "The first priority is to return the industry to normal and safe working quickly." He said that the rapid "drift back" to the pits over the past days was a "clear signal for the NUM leaders to call off the overtime ban that the union introduced in November 1983."

Mr Scargill, however, made it clear that the overtime ban would not end. Mr Michael Eaton, the board's communications chief, said that until it ended, negotiations on the 5.2 per cent wages offer, outstanding since November 1983, would not begin.

Mr Eaton, in a tough response to the NUM's decision, said that the "problems of March 6 (when the 4m

Continued on Page 18

THE UK miners' strike had only a limited impact on day-to-day life in Britain. Its longer-term effects are more serious:

COST: Reliable estimates put it at between £2bn and £3bn ($2.1bn and $3.2bn).

COAL INDUSTRY: Extra losses amount to about £1bn; Savings of £803m in wages were achieved since the start of the overtime ban in November 1983. About 60 coal faces have been lost as a result of lack of maintenance or water damage.

DEATHS: Two miners died from injuries while on picket duty and a Welsh taxi driver, whose car windscreen was hit by a building block, died taking a working miner to work.

At least two suicides have been reported which appeared from notes left behind to be connected with the miners' strike. Eight people are said to have died as a result of accidents while digging for coal.

MINERS on strike: Initial 150,000 (out of a possible 195,000 NUM members) fell to 130,000 in November, while by last week 96,000 or 52 per cent of the men were at work. Individual miners have lost an average of £9,000 since the strike began.

The number of days lost as a result of the strike in 1984 was 22.3m forming the bulk of the annual total for all workers of 22.6m.

COAL STOCKS: 23m tonnes last March. Now about 12.5m tonnes.

IMPORTS: Increased from 5.2m tonnes in 1983 to 10m tonnes last year.

POLICE: Highest number deployed on a single day was 8,100.

COURTS: 9,778 arrests. 7,785 people have been charged.

More news and analysis, Page 14–15; Editorial comment; Hard times ahead for coal; Page 16; The strike ground them down and out, Page 17

Low-key reaction by ministers

BY PETER RIDDELL, POLITICAL EDITOR, IN LONDON

SENIOR BRITISH ministers and opposition leaders last night welcomed the end of the coal miners' strike, although the Government is likely to be cautious about its next moves.

Mr Peter Walker, the UK Energy Secretary, said he was "absolutely delighted that this tragic dispute has come to an end."

Speaking during a series of television interviews last night, Mr Walker said it was "a tragedy that the industry has suffered a great loss of markets and pits; that miners have suffered loss of their wages and that the NUM (National Union of Mineworkers) has been split from top to bottom in a dispute which, had there been a ballot, would never have taken place."

He said the important thing was "to see how swiftly we can return to normal working" and he backed the National Coal Board's opposition to an amnesty for people who had been found guilty of violence or damaging NCB property with malice and intent.

Mr Walker said he did not want to speak in terms of victory or defeat.

Nevertheless, there is no doubt that Mrs Thatcher and other senior ministers will be delighted with the outcome which they see as a vindication for their tough stance and as clear confirmation of the weakening of trade union power in Britain since the 1970s.

Public comments by ministers are, however, likely to be restained until the manner of the return to work is clearer. There is concern over what will happen in the absence of a negotiated settlement.

The outcome will reinforce ministers not only in their desire to resist the teachers' strike and other threatened actions in the public sector but also to press ahead with further legislation affecting trade union rights.

Yet some ministers, probably including Mr Walker and Mr Tom King, the Employment Secretary, are likely press for the development of contacts made in the past month with the Trade Union Congress (TUC) under Mr Norman Willis, its new general secretary.

The Labour Party response last night was muted. Mr Stan Orme, Shadow Energy Secretary who has earned wide respect for his efforts to end the dispute, expressed regret at the way the strike had ended without a negotiated settlement, for which he blamed "the intransigent Government attitude."

He said the miners had not gone back defeated and he warned of possible problems in the coalfields over the questions of victimisation and amnesty.

For the Liberal/SDP alliance, Dr David Owen, the Social Democrat leader, said he was relieved that the strike was over but said he had no sense of rejoicing. "What we need now is less politics and publicity for the mining industry and to let management and men sort out remaining problems on an individual, case-by-case basis."

There were no plans last night for a government statement to the House of Commons this afternoon

Cable & Wireless seeks major role in Chinese telecom sector

BY JOHN GRIFFITHS IN LONDON

CABLE & Wireless, the British-based international telecommunications group, is today signing agreements in Peking which could give it a major role in upgrading China's telecommunications network.

Under them, Cable & Wireless will undertake feasibility studies which are intended to lead to joint ventures in telecommunications investment with the Chinese Government.

The most important relates to the Yangtze Delta area, more than 100,000 square kilometres which includes Shanghai and three more of China's 14 major coastal cities. The Chinese Government expects to spend over $500m on telecommunications there over the next five years. Telecommunications traffic in the region is increasing at an annual rate of 25 per cent and accounts for 12 per cent of China's total telecommunications revenue.

Cable & Wireless said this could involve the installation and operation of all local long-distance and international telecommunications facilities, including optic fibre and microwave equipment.

The feasibility studies are expected to relate more to the phasing of the projects, and the timing of the needed investment, than whether they should actually proceed.

Initially, two feasibility studies are covered under the agreement, which is being signed by Sir Eric Sharpe, Cable & Wireless' chairman and chief executive, and Wu Jichuan, China's vice minister of posts and telecommunications.

In addition to the Yangtze Delta project Cable Wireless will be involved in the setting up of a $20m telecommunications technology development centre in Peking. Its intended role is to provide consultancy services to provincial and city administrations, and to provide urgently needed facilities for importing advanced technology in the form of equipment and data-based services.

A Cable & Wireless official last night described the deal as "very important to Cable & Wireless. As far as we are aware, it is the first telecommunications deal of its type we or anyone else have signed with the central Chinese authorities."

Cable & Wireless previously has been involved in a number of telecommunications projects in China, but all have been with provincial authorities or with a specific industry.

The company has a strong base in Hong Kong, with a workforce of 12,500 – making it Hong Kong's second-largest employer – and with an 80 per cent stake in both Hong Kong Telephone Company and Cable & Wireless (Hong Kong).

The latest agreement, however, is therefore also important in that it strengthens substantially Cable & Wireless' relations with China well ahead of the handing back of Hong Kong to Peking by the British Government when its lease expires in 1999. Cable & Wireless obtains a substantial proportion of its revenue from Hong Kong, where inevitably there have been uncertainties about the future despite Chinese assurances that its institutions will remain unaltered for at least 50 years after Peking resumes control.

Fierce international competition can be expected for contracts to supply equipment for the projects. Cable & Wireless said last night that "we will ensure that British companies are kept well informed. However, contracts will be awarded under international competitive tender."

Genscher bid to calm Moscow's 'star wars' fear

BY PETER BRUCE IN BONN

HERR Hans-Dietrich Genscher, the West German Foreign Minister, left Bonn for Moscow last night for speedily arranged talks today with Mr Andrei Gromyko, his Soviet counterpart, in what appears to be an urgent effort to calm Soviet fears about U.S. space weapons ahead of the U.S.-Russian arms talks which start in Geneva next week.

The Foreign Ministry in Bonn announced Herr Genscher's visit only six hours before he left. Officials in Bonn said the meeting had been arranged, at Bonn's request, in the past few days and most expressed surprise at the speed with which Moscow had agreed to the one-day talks.

It was also announced that Herr Genscher was to meet the Polish leader General Wojciech Jaruzelski, in Warsaw on Wednesday after joining President Richard von Weizsäcker, the West German Head of State, on a state visit in Helsinki tomorrow.

Bonn has become increasingly alarmed at the rhetoric between Moscow and Washington over President Ronald Reagan's plans to fund research into weapons in space. The Russians have insisted that those form part of the Geneva talks, while most of the U.S.'s Nato allies in Europe have expressed reservations about the "star wars" project.

Herr Genscher is expected to impress upon Mr Gromyko that the space weapons proposals have not even reached the research stage yet, and they should not be allowed to cripple progress on disarmament on the ground.

Although the West German Foreign Ministry said Herr Genscher had telephoned Western counterparts to tell them of his plans, the government of Chancellor Helmut Kohl in Bonn has probably the most to lose politically if the Geneva talks do not lead to some reduction in the superpower nuclear arsenal in Europe.

The collapse of West Germany's Ostpolitik late last summer is thought to have been directly related to Bonn's agreement, despite massive and popular opposition to the stationing of U.S. Pershing 2 missiles in the country.

Diplomats in Bonn believe the key to Herr Genscher's breakthrough in seeing the Soviets and visiting Poland (he cancelled his last planned visit in November) lay with Chancellor Kohl, who in his state of the nation speech to the Bundestag last week pointedly snubbed his right wing and insisted that West Germany had no claim on any territory won by Poland after the second world war.

The issue of West Germany's borders has been inflamed in recent months, and more significantly, just before the anniversary of the Nazi surrender on May 8, by calls for the return by Poland of Silesia and other ceded territories, bringing cries of "revanchism" from Moscow and its East European allies.

Chancellor Kohl's speech was quickly followed by a lightning visit to Bonn on Friday by Herr Hermann Axen, a member of the East German Politburo, who met Herr Genscher and who probably deliv-

Continued on Page 18

IMF visit causes concern in Israel

BY DAVID LENNON IN TEL AVIV

A DELEGATION from the International Monetary Fund arrived in Israel at the weekend to prepare a report on the state of the economy.

Israel is attaching more importance than usual to this visit because a negative report by the IMF could adversely affect Israel's already shaky standing as a borrower in the international financial markets.

Mr Shimon Peres, Prime Minister, is scheduled to meet the delegation, which will also hold talks with senior economic ministers and other officials during the next 2 weeks.

In recent months requests by Israeli companies for credit from banks overseas have been met with offers of loans for shorter periods and at higher interest rates than in the past.

Israel is not seeking any special assistance from the IMF. It prefers to avoid borrowing from the fund because of the tough terms that normally accompany such loans.

But Israel will need additional aid, probably from the U.S., to offset the drain on its foreign currency reserves, which continued in February for the ninth consecutive month. The reserves fell by $135m last month and now stand at $2.18bn.

Meanwhile, a delegation from the French nuclear engineering compa-

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THIS NOTICE DOES NOT CONSTITUTE AN OFFER FOR SALE AND THE STOCKS LISTED BELOW ARE NOT AVAILABLE FOR PURCHASE DIRECT FROM THE BANK OF ENGLAND. OFFICIAL DEALINGS IN THE STOCKS ON THE STOCK EXCHANGE ARE EXPECTED TO COMMENCE ON MONDAY, 4th MARCH. 1985.

ISSUES OF GOVERNMENT STOCK

The Bank of England announces that Her Majesty's Treasury has created oo 1st March 1985, and has issued to the Bank, an additional amouot of £150 million of each of the Stocks listed below:

2½ per cent INDEX-LINKED TREASURY STOCK, 2009

2½ per cent INDEX-LINKED TREASURY STOCK, 2016

The price paid by the Bank on issue was in each case the *middle market closing price* of the relevant Stock on 1st March 1985 as certified by the Government Broker.

In each case, the amouot issued on 1st March 1985 represents a further tranche of the relevant Stock, ranking in all respects *pari passu* with that Stock and subject to the terms and coodltions of its prospectus, save as to the particulars therein which related solely to the initial sale of the Stock. Copies of the prospectuses for the stocks listed above, dated 19th October 1982 and 14th January 1983 respectively, may be obtained at the Bank of England, New Issues, Watling Street, Loodoo EC4M 9AA.

Applicatioo has been made to the Council of The Stock Exchange for each further tranche of stock to be admitted to the Official List.

The Stocks are repayable, and interest is payable half-yearly, on the dates shown below (provision is made io the prospectuses for stockholders to be offered the right of early redemption under certain circumstances):

Stock	*Redemption date*	*Interest payment dates*
2½ per cent Index-Linked Treasury Stock, 2009	20th May 2009	20th May 20th November
2½ per cent Index-Linked *Treasury Stock, 2016*	26th July 2016	26th January 26th July

Both the principal of and the interest on the Stocks are indexed to the General Index of Retail prices. The Index figure relevant to any month is that published seven months previously and relating to the month before the month of pnblication. The Iodex figure relevant to the month of issue of 2½ per ceot Index-Linked Treasury Stock, 2009 is that relating to February 1982 (310.7): the equivalent Index figure for 2½ per cent Index-Linked Treasury Stock, 2016 is that relating to May 1982 (322.0). These Index figures will be used for the purposes of calculating payments of principal and interest due in respect of the relevant further tranches of stock.

The relevant Index figures for the half-yearly interest payments on the Stocks are as follows:

Interest payable	*Relevant Index figure* — *Published in*	*Relating to*
May	October of the previous year	September
November	April of the same year	March
Jannary	June of the previous year	May
July	December of the previous year	November

Each further tranche of stock issued on 1st March 1985 will rank for a full six months' interest on the next interest payment date applicable to the relevant Stock.

BANK OF ENGLAND
LONDON
1st March 1985

OVERSEAS NEWS

Nkomo condemns 'inhuman treatment' in army operation

BY OUR FOREIGN STAFF

THE LEADER of Zimbabwe's opposition Zapu party, Mr Joshua Nkomo, yesterday accused the Government of subjecting residents of the southern city of Bulawayo to "inhuman and degrading treatment" during a massive army operation over the weekend.

Thousands of troops and police took part in house-to-house searches for alleged political "dissidents" in the largest such operation since independence in 1980. The city's business district was deserted on Saturday morning as residential areas were cordoned off.

Troops last night remained in charge of the city, a stronghold of Mr Nkomo's party.

Mr Nkomo, speaking at e press conference in the capital, Harare, condemned the operation as an "election stunt" aimed at intimidating voters ahead of Zimbabwe's first post-independence elections set for June.

A government spokesman said it was e temporary measure aimed at containing political violence in the Bulawayo area, which has left two people dead in the past week.

The Government was believed to fear that their funeral could spark further clashes between supporters of Zapu and the governing Zann party of Mr Robert Mugabe, the Prime Minister. Scores of people have died over the past few months in inter-party violence.

Two years ago, Mr Nkomo, 67, took refuge in Britain for five months after a similar military operation in Bulawayo. Yesterday, he condemned the security forces for "dehumanising" and demoralising elderly residents during the operation by forcing them to "run for their lives" to a township park where their identity cards were checked.

Top Malay banker resigns

By Wong Sulong in Kuala Lumpur and Chris Sherwell in Singapore

TAN SRI Aziz Taha, Governor of Bank Negara, the Malaysian central bank, has resigned in the latest series of developments that have resulted in Mr Daim Zainuddin, the Finance Minister, tightening his control over the country's financial and monetary policies.

The reason for Tan Sri Aziz's resignation is unclear, but he and Mr Daim have not seen eye-to-eye on fundamental aspects of monetary and banking policies, or on the stock exchange.

Datuk Jaffar Hussein, currently executive chairman of Malayan Banking, the second largest bank, is tipped to take over the central bank.

Tan Sri Aziz, 53, became governor in 1980 after serving as deputy governor for 10 years. He submitted his resignation last week.

Contadora initiative gets modest boost

BY HUGH O'SHAUGHNESSY, LATIN AMERICA CORRESPONDENT, IN LONDON

THE FALTERING Contadora peace initiative for Central America received a modest boost after the meeting in Montevideo on *Saturday* of President Daniel Ortega of Nicaragua and Mr George Shultz, U.S. Secretary of State.

The two men were *attending* the inauguration of the new civilian leader of Uruguay, President Julio César Sanguinetti.

After the meeting on Saturday, Mr Shultz commented that the sooner the Contadora process resumed, the better. The Contadora peace project, led by Mexico, Panama, Colombia and Venezuela, seemed close to failure last month after Costa Rica boycotted a meeting in Panama because of Nicaragua's arrest of a Nicaraguan draft dodger as he left the Costa Rican embassy in Managua.

At the weekend it was disclosed that the Nicaraguans would release the draft dodger, Jorge Urbina Lara.

For their part, the Costa Ricans announced the expulsion from Costa Rica of Sr Adolfo Calero, leader of the FDN, a counter-revolutionary group that has been attacking Nicaragua.

Sr Calero, who is usually based in Miami, had been in San José for a press conference to announce plans for unity among the often bitterly divided counter-revolutionary bands.

The way now seems open for a resumption of the Contadora peace talks. In Montevideo, President Belisario Betancur of Colombia announced that they would resume immediately.

Mr Shultz's remarks have not, however, dispelled the feeling that U.S. *attitudes towards Contadora* remain at best equivocal. The prospect of a resumption of the talks was welcomed by M Claude Cheysson for the European *Communit,* and by the Spanish Prime Minister, Sr Felipe González, and Italian Prime Minister Sig Bettino Craxi — who were also in *Montevideo for* the inauguration.

Walesa 'ready to protest'

By Christopher Bobinski in Warsaw

MR LECH WALESA, leader of the banned Polish *Solidarity* union, is maintaining his militant stance against food price increases due to be introduced in Poland today. Mr Walesa said that, *should* workers at the Lenin shipyard in Gdansk, where he works, wish to protest about the rises in the price of foodstuffs, he would join them.

Last week, he said he had been criticised by younger workers at the yard for calling off a token general strike, planned for last Thursday, when the Government announced it was reconsidering its prices strategy.

In effect, the only real change the authorities have made is to spread the increases over the four months between now and June. A rise in hot water and central heating rates has also been postponed until 1986, and the increase in the cost of domestic coal was dropped from 30 per cent to 20 per cent.

S. Africa fights for investment

BY TONY ROBINSON IN JOHANNESBURG

THE GROWING strength of the *South African disinvestment lobby* has led the South African Ministry of Foreign Affairs to set up a special department to co-ordinate government moves to *head off the* threat.

At the same time, Mr Steven Bisenius, a former *Iowa state senator* and, until recently, executive director of the U.S. Chamber of Commerce in Johannesburg, has formed a new private organisation called *the American Association for Trade* and Investment in Southern Africa to counter the disinvestment lobby and encourage further U.S. invest*ment.*

The association plans to set up an office in the U.S. next month. Part of its function will be to drive home the message that *as many as* 100,000 U.S. jobs would be at stake if U.S. trade and investment were impeded.

U.S., France discuss shuttle flight

By David Marsh in Paris

U.S. and French space officials are *due to meet in Washington tomorrow* and Wednesday to try to reschedule a planned flight of the space shuttle with a French astronaut on board.

The flight of the U.S. vehicle Challenger was to have taken place this week. It was cancelled at the weekend by the U.S. space agency Nasa after a series of technical problems with a large tracking satellite planned to be launched as part of the shuttle mission.

M Jacques-Louis Lions, president of France's CNES space agency, and M Frédéric d'Allest, its managing director, will discuss in Washington a new date for the mission.

Experiments on the impact of weight lessness onthe human body, due to have been carried out by the French astronaut, M Patrick Baudry, could be performed on the flight of the Discovery shuttle originally planned for March 22. A more likely outcome, however, is that a longer postponement will be agreed.

Zia extends his powers

GENERAL Zia-ul-Haq, the Pakistan leader, has unveiled constitutional amendments to increase the powers of the presidency he now holds and curtail those of future prime ministers, Reuter reports from Islamabad.

The amendments to the suspended 1973 constitution will also create an 11-member military-civilian National Security Council to advise the Government in a national crisis.

Gen Zia has been figurehead President since 1978 in addition to the all-powerful role of chief martial law administrator he assumed on seizing power in a July 1977 coup that toppled Prime Minister Ali Bhutto, who was later hanged.

The office of President, which Zia will hold for a further five years following a controversial referendum last December, will have sweeping powers, some previously exercised by the Prime Minister.

Poll victory for Hawke's party

By Michael Thompson-Noel in Sydney

THE FEDERAL Australian Labor Party Government of Mr Bob Hawke was breathing easier yesterday following the re-election on Saturday of the state Labor government in Victoria.

There was e swing to the Liberals of just under 2 percentage points, but Mr John Cain, the Victorian premier, became the first Labor leader in Victoria to be re-elected for consecutive terms, and the first to gain control of both the upper and lower houses.

The result was a good one for Labor, breaking a recent run of reverses for Mr Hawke whose Government has floundered since losing seats in the general election late last year.

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Tokyo set to resume telecommunications talks with U.S.

BY JUREK MARTIN IN TOKYO

JAPAN expects its suspended talks on telecommunications with tha U.S. to be resumed this week, possibly as early as today, according to a Japanese Cabinet Minister.

Mr Megumu Sato, Minister of Posts and Telecommunications, said after a Cabinet meeting on Friday that Japan would then be in a position to show the U.S. delegation fuller details of the new telecommunications laws due to take effect on April 1.

The U.S. Commerce Under-Secretary, Mr Lionel Olmer, who is the chief U.S. negotiator for the talks, would probably be in Tokyo today, Mr Malcolm Baldridge, Commerce Secretary said during a television hook-up between Washington and Japan sponsored by the U.S. Chamber of Commerce.

Last week, the U.S. summarily postponed this week's scheduled round of negotiations, in which it is seeking guarantees of reasonable access to the Japanese telecommunications market under the new, more liberal régime—which includes the transformation of NTT, the state monopoly, into a private company, though still under government control.

It did so to serve a general warning to Japan over what it considers bureaucratic obfuscation and specifically because it claimed there was no basis for negotiation when a critical ingredient—the new legislation—was not on the table. Monday, the U.S. said it had received drafts of only six of the 72 ordinances that make up the Bill.

Meanwhile, tha U.S. and Japan have agreed to extend for several months negotiations on another thorny bilateral issue—aviation.

Japan had threatened to retaliate against U.S. carriers if Nippon Cargo Airlines was denied U.S. landing rights. The U.S. negotiator described the state of play after several days exchanges here as "fluid."

Europe, Japan 'will take most of Moscow's deals'

BY NANCY DUNNE IN WASHINGTON

DESPITE recent efforts by the Reagan Administration to improve trade relations with the Soviet Union, Europe and Japan will get most of Moscow's new business, according to reports here.

Any enthusiasm that Moscow might feel for U.S. manufactured goods and services will be dampened by U.S. efforts to control hi-tech imports to tha Eastern bloc, Dr Daniel Barnes, of Wharton Econometric forecasting associates, said last week.

U.S. trade officials had hoped that improved relations with Moscow, and President Reagan's second term, would also bring increased sales of equipment and technology for energy exploration and development.

However, these will be limited, Dr Barns said, by the Soviet Union's desire to achieve a more balanced trade with Europe and Japan, as well as the strong dollar and the lack of U.S. commitment to trade with the East.

He predicted that Soviet imports bought with hard currency would grow at an annual rate of 13 per cent a year, reaching $56bn (£51bn) by 1989.

After the January visit of Mr Lionel Olmer, the Commerce Department's Under-Secretary, to Moscow, there were reports in the U.S. Press that the Soviet Union was anxious to improve trade relations and to obtain most-favoured nation status with the U.S. Hints were dropped of a liberalised Soviet immigration policy which would clear the way for such status.

Moscow, however, has yet to set a date for a follow-up visit by Mr Malcolm Baldridge, the U.S. Commerce Secretary, who had hoped to press for trade détente.

The Washington Post said on Friday that several "plans" for Soviet development projects worth billions of dollars would be awarded to European and Japanese companies, with U.S. participation limited to specific short-term contracts

Bangemann claims step to new Gatt pact

By Peter Bruce in Bonn

DR MARTIN BANGEMANN, West German Economics Minister, claimed yesterday a high-level weekend conference near Stuttgart had produced a "breakthrough" in efforts to set a renegotiation of the General Agreement on Tariffs and Trade (Gatt) in motion.

He said that two days of informal talks at Ludwigsburg, had resulted in unanimous agreement that a new round would have to begin next year

The talks, hosted by the West Germans, included the U.S. Special Trade Representative, Mr William Brock; the UK Trade Minister, Mr Paul Channon; the cive-president of tha European Commission, Mr Willy de Clerc; the Gatt director-general, Mr Arthur Dunkel; and ministers or senior representatives from, among other countries, Canada, Japan, the Netherlands, Sweden, Turkey, South Korea and India.

Referring somewhat enthusiastically to the "spirit of Ludwigsburg,'" Dr Bangemann insisted a new Gatt round could now be convened provided present signatories did not, meanwhile raise more protectionist barriers.

The only reservation expressed by the developing countries present was that the industrialised West might "ride roughshod" over them in any new negotiations. Ha called on the industrialised countries to hold more bilateral talks with weaker nations.

BA hits back at Malaysia air tax

By Wong Sulong in Kuala Lumpur

BRITISH AIRWAYS has decided to suspend further talks with Malaysian Airline System, (MAS) on the Malaysian national carrier's demand for a fifth weekly flight to London "until the question of the recent tax legislation in Malaysia has been satisfactorily resolved."

The suspension is the first retaliatory action taken by a foreign airline in protest at the Malaysian Government's controversial tax move last October which ended a tax exemption for employers who give free trips to their employees unless they travel by MAS.

Why U.S. car industry faces new danger

BY TERRY DODSWORTH IN NEW YORK

MR LEE IACOCCA, chairman of Chrysler U.S., had a characteristically pungent praise to describe President Reagan's decision to end the voluntary export restraint on Japanese cars to the U.S.

It was he said, "a sad day for America." But for once, the most popular corporate figure in America was out of step with the man in the street. "It's very encouraging for the consumer," said Ms Doreen Brown, president of Consumers for World Trade.

Both responses reflect the feeling that a totally open market to Japanese car imports will mean much more price competition.

Critics argue that the record profits of the big three U.S. motor manufacturers last year—just under $10bn (£9bn) in aggregate was a result of inflated pricing just as moch as improved competitiveness.

No one is very certain however, just how the iodustry will respond to the change, and to what degree prices will fall.

From the point of view of the big Japanese manufacturers, for example, it is by no means obvious that they will want to push aggressively into the U.S. again, cutting prices in order to raise their market share.

In the past four years uf restraints, the share of Japanese companies in the U.S. has slipped from about 25 per cent to a little under 20 per cent, as their quotas were raised only minimally in a period of rapid market expansion.

But the profits of the Japanese companies soared last year during the boom, because they were able to raise their prices to match the U.S. manufacturers. For the Japanese companies already well established in the U.S., there is considerable comfort in tha status quo.

Many analysts also believe that the Japanese authorities will be strongly opposed to a rapid increase in car exports.

They expect that the Ministry of International Trade and Industry in Tokyo will keep some informal limits on shipments to the U.S. because the Japanese feel themselves so vulnerable to U.S. criticism that trade is all one way at the moment.

The more Japan exports, the more it comes under pressure to open its own market.

In addition, there is a widespread feeling in the industry that the large Japanese companies—Nissan Toyota and Honda — will not want to undercut their new U.S. manufacturing investment by importing more keenly-priced products.

Each of these companies now has substantial funds tied np in U.S. productions and therefore some interest in maintaining current profit margins.

THE Japanese Government will urge domestic carmakers to moderate exports to the U.S. after voluntary restraints expire at the end of the month, Government officials said, Reuter reports

They were commenting on President Ronald Reagan's decision not to ask Japan to extend its voluntary restraints on car sales to the U.S. for a fifth year.

Japanese car makers have demanded that the quota, which limits total car shipments to the U.S. market to 1.85m should be abolished.

Even so, there will be enormous pressure to increase imports for several reasons when barriers come down at the end of March.

First, smaller Japanese car groups which have been prevented from expanding in the U.S. because of the trade restrictions, may well become much more aggressive. These companies include Mazda, Mitsubishi and Snbaru.

Second, the Sonth Korean car groups are also poised to make an assault on the U.S. market, with the kind of low-cost small vehicles used as the vanguard of the initial Japanese drive 20 years ago.

If they come in and begin to revive the small car market, with cheap models, other manufacturers, including the Japanese, will hava to respond.

Third, U.S. producers themselves will begin to compete more in the smaller car sector by importing their own vehicles from their Far Eastern satellites.

General Motors bas plans to ship around 300,000 Isuzu Suzuki units a year to be sold under Chevrolets; Chrysler says it will be increasing its imports of Mitsibushi Colts from around 85,000 to 285,000 a year.

Several academic studies have suggested that under these conditions, total car imports will eventually mount from their present level of about 25 per cent to 40 per cent.

This means a huge challenge to U.S. jobs—the United Auto Workers reckons that 200,000 could be lost—and a big threat to marginal manufacturers in the U.S.

It also maans that the efforts of the U.S. manufacturers to make themselves more competitive will bave to go further yet.

Spain relies more on car exports

BY DAVID WHITE IN MADRID

CAR exports to the Common Market have become the mainstay of the Spanish motor industry, to the extent that the six producers are now more export-orientated than their counterparts in Japan and West Germany, according to an industry report.

Annual production and sales figures from Anfac, the Spanish motor manufacturers' association, show a sharp increase in the industry's reliance on exports—from 56 per cent in 1983 to 61 per cent last year.

The association said this was the bighest proportion anywhere in the world and warned about the industry's vulnerability as a result.

As car sales in Spain fell off, exports rose 12 per cent in 1984 to 640,000 units, after a climb of almost 30 per cent the year before. At the same time, the share of total exports going to the EEC rose from 87 per cent to 91 per cent.

"The risk of instability threatening our production is now excessively high," the association warned. The European market, which it described as "saturated," was now the Spanish industry's Achilles' heel, it said in its monthly bulletin.

Philips wins £90m China order for video-disc players

BY LAURA RAUN IN AMSTERDAM

PHILIPS, the Dutch electronics group, has received a Fl 375m (£90m) contract from the Chinese city of Shenzhen for video-disc players and for equipment to assemble the players in Shenzhen.

The order for the Laservision system will nearly quadruple Philips' sales of Fl 100m a year in China and is a big boost to the Dutch company's hopes for a Fl 1bn-a-year business there.

Philips received a separate Fl 50m order from Sheozhen in December for Laservision players and discs.

Under the new Shenzhen contract, Philips will deliver 10,000 Laservision players of tha playback-only type this year and next

SHIPPING REPORT

Bid to speed tankers for scrap

BY ANDREW FISHER, SHIPPING CORRESPONDENT

THE LAMENT long heard in shipping markets that too many ships are chasing too little cargo was given extra voice last week.

As tanker and dry cargo rates remained flat—Galbraith's said tanker activity was the slowest for some time—moves to accelerate world scrapping of surplus tonnage were under way.

The scope of the moves will be aired in Hong Kong today at the initiative of the International Maritime Industries Forum (IMIF) which has brought together shipbuilders from the Far East and Europe.

It has also been reported that the Japanese Government is willing to help developing countries which want to set up their own shipbreaking industries.

"Too many ships chasing too little cargo remains the most serious and protracted problem of all facing the maritime industries," said Mr Jim Davis, chairman of IMIF.

At the Hong Kong meeting, he will try to persuade countries to set up a fund to subsidise ship scrap values (making it more worthwhile for owners to scrap) and to attract capital for new scrapyards. All this could cost more than $100m (£91m).

London shipbroker John I. Jacobs says in its latest six-monthly tanker review that "an unacceptably high proportion of the world fleet" is over-age and thus ripe for demolition.

WORLD ECONOMIC INDICATORS

UNEMPLOYMENT

		Jan. '85	Dec. '84	Nov. '84	Jan. '84
U.S.	000s	8,484.0	8,191.0	8,142.0	9,026.0
	%	7.4	7.2	7.1	8.0
W. Germany	000s	2,619.4	2,325.2	2,189.2	2,539.3
	%	9.7	8.6	8.1	9.4
France	000s	2,553.2	2,524.9	2,524.9	2,252.1
	%	11.2	11.1	11.1	9.9
Italy	000s	3,132.9	3,072.6	3,033.1	2,972.4
	%	13.7	13.5	13.3	13.0
Netherlands	000s	804.2	796.5	797.5	862.7
	%	14.1	14.0	14.0	15.1
Belgium	000s	619.4	605.4	617.8	601.7
	%	15.0	14.7	15.0	14.6
UK	000s	3,341.0	3,219.4	3,222.6	3,199.7
	%	12.6	12.2	12.2	12.1
		Dec. '84	Nov. '84	Oct. '84	Dec. '83
Japan	000s	1,454.0	1,510.0	1,590.0	1,430.0
	%	2.6	2.7	2.8	2.6

Source (except U.S., Japan): Eurostat

In 1984 Central Government took new powers to control local authorities.

As the Government begins to use the powers it acquired under the 1984 Rates Act, it is worth remembering why this Act caused so much controversy when it was first presented to parliament.

Its most contentious feature was the power Central Government gained to ratecap local authorities.

Ratecapping means the Government can control the money any council can spend regardless of the effect upon local services.

Furthermore, if a council chooses to appeal against being ratecapped, the Government can also tell it exactly what it must spend its money on.

And voters in local elections who may feel a higher spending level is needed, can do nothing to change these decisions.

The stated intention of ratecapping was to hold down rates, and it would be surprising if such sweeping powers did not actually achieve this result in ratecapped areas.

But the question that needs to be answered is whether such powers are necessary or fair.

On a national basis, Central Government spending has increased 20 per cent faster than local spending, during the lifetime of the present government.

What's more, the government sponsored Audit Commission Report has found that the information Whitehall civil servants use to decide what local councils should spend is inadequate and out of date.

Not surprisingly, critics from all parties have predicted that ratecapping will complicate local finance and bring no real benefits.

In other words, the Rates Act is bad law even when judged by the government's own criteria.

But it has also given rise to other, more fundamental criticisms.

In 1984, Ian McCullum a former chairman of the Association of District Councils and a member of the Conservative party said of the Rates Act: "These plans represent state intervention in local affairs on a scale unprecedented in this century."

Ted Heath, former Conservative prime minister said: "They are powers such as we have never taken before, even in two World Wars."

And the Local Government Chronicle declared: "(The Act) concentrates Government power to an extent unparalleled in this country since local authorities were created."

Such critics know that an increase of power at the centre means fewer democratic safeguards for us all.

On the 19th February this year Patrick Jenkin the Government minister responsible for ratecapping confirmed to the Times newspaper that the hit-list of councils to be ratecapped next year could be "considerably bigger" than this year.

He also admitted that Government policies were "leading to ever more centralist solutions."

Ratecapping makes no sense.

FOR FURTHER INFORMATION ON RATECAPPING CONTACT ANY OF THE FOLLOWING AUTHORITIES: BARKING AND DAGENHAM · CAMDEN · GREENWICH · HACKNEY · HARINGEY · ISLINGTON · LAMBETH · LEWISHAM · NEWHAM · SOUTHWARK · GLC · ILEA

Issued on behalf of the above authorities by the ALA.

Lack of progress on Euro-fighter causes concern

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITAIN'S aerospace industry is becoming increasingly concerned at the lack of progress in effnrts to reach agreement on development of the proposed European Fighter Aircraft (EFA).

The aircraft is likely to be needed in substantial numbers in the early to mid-1990s to replace ageing existing aircraft such as the Jaguar and the Phantom and to supplement the Tornadn and other combat aircraft. Cost of the venture is likely to run to several billion pounds.

Talks between the aerospace industries of the five natinns involved – the UK, West Germany, France, Italy and Spain – on the feasibility nf such a venture have made little progress.

This is attributed largely to continued French insistence on taking design and programme leadership, with also a majnrity share of the production work.

One report bas suggested that, while the French have cut their nriginal demands for a 46 per cent workshare down to about 31 per cent, this is still more than the UK *and West German aerospace industries* are prepared to concede.

The latter would like to see a more equitable distribution – such as 25 per cent each for the UK, West Germany and France, with Italy taking 15 per cent and Spain 10 per cent.

There are also reported to be continued differences about the size and capability of the EFA, with the French industry still seeking a lighter aircraft for ground attack purposes, while the UK and West Germans seek a larger aircraft to undertake higher-altitude air superinrity missions.

The differences are still so great that there is now doubt whether a proposed March 19 meeting of the National Armaments Directors of the five nations involved to consider the results of the past six months' work on the feasibility studies for the EFA will be able to report anything positive to their defence ministers.

The latter were also due to meet in March in Rome to give the go-ahead for full-scale project definitinn, but that meeting has already been postponed until May or June and may now be put back further.

Mr Michael Heseltine, the British Defence Minister, is still anxious for a full five-nation collaborative venture. The UK industry is much less enthusiastic. While it supports the idea of collaboration on the EFA, it is not prepared to accept it at any price and wants a venture that gives every participant e fair chance to exploit its military aviation production skills.

There is a growing feeling that, if agreement on this with France is not possible, the UK would be wiser to press for a more limited collaborative venture with West Germany and Italy, as in the Panavia Tornado project.

The UK industry's concern is particularly acute because the Tornado programme, which has been the mainstay of its military aircraft business for years, is now past its peak and from now on will be running down.

N. Ireland Assembly to debate violence

By Our Belfast Correspondent

THE NORTHERN Ireland Assembly has been recalled for an emergency debate on security today as a result of the upsurge of violence by the Irish Republican Army (IRA). Another member of the Royal Ulster Constabulary (RUC) was murdered yesterday, the 11th member of the security forces to be killed in four days.

The policeman, a Roman Catholic and training instructor, was shot dead by a gunman in front of his family as he arrived for Mass near Enniskillen.

After the killing on Thursday night of nine RUC officers in a mortar attack on the police station at Newry and the death of a soldier in the Ulster Defence Regiment, 31 members of the Assembly signed a motion for the recall.

The Democratic Unionist party and the Official Unionist party have tabled a motion calling for "a relentless security policy to eradicate terrorism."

Mr Douglas Hurd, the Northern Ireland Secretary, is to make a House of Commons statement on security.

Sleipner veto could delay development of N. Sea gasfields

BY DOMINIC LAWSON

THE POSTPONEMENT into the next decade of e number of large North Sea gasfield developments is in prospect after the decision by the Government last month to veto the British Gas Corporation's proposed deal to buy \$30bn of gas from Norway's Sleipner field.

The irony of this will not be lost on the Government, which had rejected the deal in part because it wanted to give a boost to the UK offshore supply industry.

This is likely to be one of the results of a big review of UK gas supply and demand being carried out by British Gas in the wake of the Government's decision.

The Government appears to have also ensured that British Gas will find it difficult to expand its share of the industrial energy market at the expense of coal.

Sleipner supplies were to have filled a shortfall in supplies of gas to the UK that British Gas expected in the mid-1990s. British Gas is still worried that UK North Sea producers will not be able to fill that gap, but at the same time the corporation is being offered more gas than it needs from oil companies propos*ing gas developments which would* come on-stream in the next five years.

British Gas is likely to propose that a number of these developments should be postponed to help fill the supply gap in the mid-1990s. The biggest development that could be affected is BP's cluster of four gas fields known as Cleeton, Ravenspur, Hyde and Hoton which contain about 2.5 trillion cubic feet of gas.

BP had originally hoped for first production by 1986 but has now set its sights on 1988.

Other projects that could be delayed are Conoco's 'V' field complex and Britoil's Amethyst field.

The cause of the new North Sea gas strategy is the Government's apparent determination to prevent British Gas enlarging its share of the market in energy for industry. With Sleipner gas, the corporation would have had the security of supplies to increase its share of that market, particularly at the expense of coal.

Last October, confident of getting Sleipner gas, British Gas announced that it would launch a big sales drive in the industrial sector, to boost *its share of that market*

Jobs offer in bid for RAF trainer contract

BY OUR AEROSPACE CORRESPONDENT

PRATT & WHITNEY Aircraft of Canada, one of the world's leading aero-engine builders, has offered to set up an industrial base in Britain, as part of its bid to win the engine contract for the Royal Air Force's (RAF) new basic trainer.

The RAF wants about 150 trainers to replace the Jet Provost, worth over £200m. An international contest is now in its final stages, with British Aerospace offering the Swiss Pilatus PC-9; Short Brothers of Belfast the Brazilian Embraer Tucano; Hunting Firecracker of the UK the Turbo-Firecracker; and Westland the Australian Wamira II.

Pratt & Whitney has its PT-6 turboprop engine on offer for all four aircraft, but for the Tucano, Shorts has also proposed the U.S. Garrett TPE-331 turboprop.

Pratt & Whitney says that if any one of the aircraft on offer is selected with the PT-6 engine, it will set up an international support centre in Britain to service, overhaul and repair the company's entire range of engines in service with operators throughout Europe, the Middle East and Africa.

That will generate about 450 jobs directly and indirectly. Pratt & Whitney will also use this facility to assemble and test the PT-6 engine for the RAF trainer programme, and for any export markets that may arise from that venture.

The company would also start talks with Rolls-Royce, with a view to licensing that company to build the PT-6.

Pratt & Whitney says the effect of the plans would be to ensure that up to 100 per cent of the cost of the PT-6 in the basic trainer would be placed as offset work in Britain, probably amounting to £56.5m by 1991.

The industrial offset arrangements in the trainer contest are becoming of increasing significance, since it is now likely that it is upon those that the final choice nf aircraft will be made – the technical capabilities of the aircraft involved being so similar.

MPs call for statement on phone-tap claims

BY PETER RIDDELL, POLITICAL EDITOR

THE GOVERNMENT faces further disagreement at Westminster this week over unauthorised phone tapping ahead of a debate in the House of Commons on Wednesday on the Interception nf Communications Bill, which introduces a new statutory framework.

Lord Bridge nf Harwich, the chairman of the Security Commission, is due to report before the debate into allegations that the phones of activists for civil liberties, members of trade unions and leaders of the Campaign for Nuclear *Disarmament have been tapped.* He has examined papers of previnus administrations as well as the present one.

The expectation in Whitehall is that Lord Bridge's inquiry will not reveal improper interceptinns. But weekend press reports that wholesale tappings bave occurred under blanket authnrisations have already led to demands for further Commons statements.

Labour leaders feel that Government explanations so far are inadequate, especially since the inquiry does not cover unauthorised operations. Consequently, the opposition may still press for the postponement of the second reading of the Bill on Wednesday.

MI5, the security service, is also likely to come under public scrutiny after the completion of a report by the Security Commission. The report followed the conviction last year of Mr Michael Bettaney for passing information to the Soviet Union.

There has been pressure from both Labour end the Alliance par*ties for the security and secret ser*vices to come under closer parliamentary scrutiny through a committee of privy counsellors.

● Mr Cyril Smith, the Liberal MP for Rochdale since 1972, said over the weekend that he is almost certain not to stand for parliament again at the next general election.

The move had been widely expected since Mr Smith has made no secret of his increasing disillusion with Westminster politics. He has ceased to be an important influence on the running of the Liberal Party.

Tax reforms urged

BY PHILIP STEPHENS

THE CASE for a wholesale dismantling of tax privileges including the abolition of mortgage tax relief and the introductinn of a tax nn pensinn fund incomes, is put today in the London Business School's Financial Outlook.

The writer, Mr Philip Chappell, a director of Morgan Grenfell, the merchant bank, calls for a wide-ranging report to simplify the structure of taxation and to remove the distortinns in the present system.

Mr Chappell says thet such "fiscal neutrality" would strengthen freedom nf choice in society and improve economic efficiency, while creating greater personal involvement in the ownership of wealth.

He acknowledges that removing tax privileges on a piecemeal basis runs the risk of failure in the face of strong opposition from interest groups.

Instead, he argues for a total package of changes that would include taxation of income on all new contributions to pension funds, the abolition of stamp duty, capital gains and capital transfer taxes, and the ending of tax relief on mortgages for house purchase.

The result would be a huge simplification of "the fiscal jungle", making investment decisions far less susceptible to tax considerations.

Max Wilkinson on the Liberal/SDP's proposals to the Chancellor

Alliance finds an unexpected budget ally

NOT MANY people in the Liberal/Social Democrat (SDP) Alliance would think that proseletysing monetarist Professor Patrick Minford could be a natural ally.

Yet there is an uncanny similarity between the Alliance's budget proposals announced this weekend and those of Prof Minford, the head of Liverpool University's economics department.

Both are urging Mr Nigel Lawson, the Chancellor of the Exchequer, to borrow rather more next year than he had planned. Both say that is necessary to stimulate economic growth and the creation of jobs. Both want him to pursue a relatively tight monetary policy to hold back inflation and both accept that that will put upward pressure on interest rates. Both, too, believe their policies would result in a substantial cut in unemployment.

Even their figures are similar. Prof Minford wants the Chancellor to expand borrowing from a planned £7bn to £8bn, whereas the Alliance says it would go for £8.9bn.

In relation to the huge margins of error in forecasting the public-sector borrowing requirement, those figures are almost the same.

How is one to reconcile that strange consensus with the Alliance's claim to be charting a "new political and economic course" while Prof Minford is proclaiming enthusiastic support for the general lines of the Government's stategy?

One answer is that although the Alliance and Prof Minford agree about the broad outline of fiscal and monetary stance the details and the reasoning behind their strategies are different.

Both want tax cuts, though in somewhat different ways, but the Alliance also suggests an extra £1bn of public spending on capital projects, with nearly £1.3bn of extra spending on special training and job creation schemes.

The Alliance proposes that Britain should become a full member of the European Monetary System (EMS), as a help to stabilising sterling. However it acknowledges in words that are similar to Prof Minford's that defence of the pound would require "a disciplined monetary policy and possibly higher interest rates than we have previously advocated."

The most apparent difference is in their approach to inflation and wage control. Prof Minford shares the Government's pessimism about incomes policies. He relies instead on the view that strict monetary control will lead to wage moderation, as people become convinced that inflation will fall.

The Alliance, in contrast leans more strongly towards a voluntary incomes policy or combination of wage freeze and inflation tax backed up by more reliance on arbitration and profit-sharing in the longer term.

However in describing the strategy, the Alliance uses a phrase that Prof Minford or Mr Lawson himself might happily have used: "An old-style rigid centralised pay policy imposing statutory restraint would not work."

So it is not surprising that the Alliance's hopes for reducing wage rises seem modest. A simulation on the London Business School's (LBS) economic model suggested that wages would rise faster under Alliance policies than would be the case under the more restrictive policies assumed for Mr Lawson's budget.

The Alliance assumes merely that it would be able to persuade trade unions to moderate wage demands to 1 percentage point below what would be expected in a "free market."

If an incomes strategy could be more successful in cutting pay settlements, economic expansion could be correspondingly faster, it says.

That is not far from the position of the Government's recent paper on pay and jobs, which suggested that a 2 per cent cut in real wages might lead to the creation of some 300,000 jobs.

The Government is more optimistic about the free market's capacity to respond to lower wages by creating jobs. Nevertheless it does to some extent share the Alliance's view that wage moderation would give the Government scope for easing its policies.

In the shorter term, however, the Alliance's strategy for jobs relies heavily on the direct effect of taking youngsters off the register by doubling the size of the community programme (to 250,000 people), with a new programme for the long-term unemployed offering 150,000 places after two years. A further 250,000 places would be provided on the Youth Training Scheme by making it available to everyone aged 16 or 17. Altogether that might take 530,000 people off the unemployment register.

The direct reflationary aspect of the Alliance proposals is very modest. One option it considered would, according to the LBS simulations, add about half a percentage point a year to growth up to 1988, but at the cost of accelerating inflation (7 per cent by 1987).

The option it prefers would keep a tighter hold on inflation even though that would mean sacrificing growth in the later years. The boost to capital spending would be continued in 1986-87 and in 1987-88, with about £800m of that being spent on housing.

Wage restraint is assumed to hold earnings growth 1 percentage point below the level it would otherwise have achieved, and a tight monetary policy would keep the pound steady within the EMS.

That policy would cut inflation to 5¼ per cent by 1988 after a rise to 7 per cent this year. However, total growth of the economy over the next four years would be almost the same as the LBS is forecasting under existing policies.

The simulations show that the Alliance would have to deliver considerably more in the way of wage restraint if it were to offer an overall economic prospect that is convincingly better than Mr Lawson's

The Alliance, to its credit, has not fudged that commonsense conclusion in its economic analysis, although the political rhetoric of its strategy document does suggest an easy alternative to the Chancellor's "mulish obstinacy in sticking to a thoroughly discredited strategy."

Editorial comment, Page 16

British Gas to acquire stake in N. Sea find

BY DOMINIC LAWSON

THE GOVERNMENT has approved an unprecedented deal in which the state-owned British Gas Corporation will buy a stake in a North Sea discovery.

British Gas has never before bought or sold North Sea assets, but has been satisfied with what it has been awarded by the Government in successive North Sea licensing rounds.

The corporation is spending between £10m and £15m on buying the North Sea assets of the Malaysian company Yayasan Pelaburan Bumiputra. That consists of a 10 per cent stake in the North Sea block 22/5B, which contains the Drake field. The discovery was made in 1982 by the U.S. company Superior Oil and it has yielded gas and small amounts of condensate, a very light oil.

British Gas has refused to comment on the affair but the Department of Energy said last week that it was approving the deal, after some six months' consideration.

British Gas is likely to be very encouraged by the Government's assent. Under the Conservative Government, British Gas's role in the North Sea has been cut back. But this move is an expansion of the corporation's North Sea interests, effectively funded by Government.

Now that precedent has been set, the way appears open for the corporation to make further acquisitions, particularly if it is not well treated in forthcoming licensing rounds.

British Gas advanced strong arguments for its first acquisition. The corporation has 50 per cent stakes in the three surrounding blocks and there is a strong possibility that the field might spill over into one or more of those. With an interest in the key block 22/5B, British Gas will be able to act as a catalyst in the appraisal development of the whole area.

After the decision to turn down British Gas's proposed $30bn acquisition of the gas in Norway's Sleipner field, the Department of Energy is keen to boost exploration and appraisal of UK gas prospects to avoid a shortfall of gas supplies in the mid 1990s, when Sleipner was due to have come on stream.

The Drake field is estimated to contain between 600bn and 800bn cubic feet of gas. It is situated 150 miles north east of Aberdeen, further north than any UK gasfield yet developed.

Big clearing banks expect to report solid profit increases

BY DAVID LASCELLES, BANKING CORRESPONDENT

BIG FOUR BANK PROFITS – £m pre-tax

	1983	1984 estimates			
		Greenwell & Co	Hoare Govett	Grieveson Grant	de Zoete & Bevan
Barclays	557	676	680	675	670
Lloyds	419	459	460	455	455
Midland	225	81	95	85	85
NatWest	514	638	650	630	640

THREE of Britain's big clearing banks are expected to report solid increases in 1984 profits this week. The fourth, Midland Bank, will be counting the cost of the huge losses sustained by Crocker National Bank, its California subsidiary.

Their reporting season comes amid speculation that one of them will announce a large rights issue. Bank stocks fell sharply at the end of last week as investors anticipated a call for funds with Barclays cited as the likeliest candidate.

London broking analysts expect Barclays and National Westminster, the UK's two largest banks, to report profits rises of up to 25 per cent, reflecting the buoyant trading conditions on the UK market last year. Loan demand was strong, and banks were able to pass on the higher rates of interest they have been paying depositors as they compete for savings.

Bad debts are still running high and hurting profits, but they may now be falling off slightly as the economic recovery continues.

Lloyds Bank, the smallest of the big four, could show an improvement of 10 per cent. While its UK business has also been doing well, its international arm still suffers from high exposure to problem Third World countries and cannot generate enough profitable new business.

These three banks are expected to raise their dividends by 7-8 per cent, slightly more than inflation.

Midland Bank's profits will show a sharp decline, from £225m in 1983 to around £90m as a result of its disastrous experience with Crocker, which has to make a provision of over $500m last year for bad debts.

The bank's jointly-owned merchant banking subsidiary Samuel Montagu will also show reduced earnings because of its high development costs and the likelihood that it will have to make a large contribution to the Bank of England's bail-out fund for Johnson Matthey Bankers.

The rest of Midland's business, which includes affiliates like Thomas Cook and Forward Trust, has probably been doing quite well. Midland has already said that it will hold its 1984 dividend even though this will make it the first clearing bank in recent history to dip into reserves to make its payout.

Plessey wins £100m Trident sonar deal

BY BRIDGET BLOOM, DEFENCE CORRESPONDENT

A GROUP of British companies led by Plessey Marine has been awarded a £100m contract for the development of a new sonar system for the Trident nuclear deterrent.

The contract, awarded by the Ministry of Defence (MoD), is for the "design, development, prototype and pre-production" of a "new generation of integrated sonar systems."

The new sonars will be the critical element in the tactical weapons fit of the four new 16,000-tonne Trident submarines which will be built by Vickers of Barrow. The Trident strategic nuclear missiles are being bought from the U.S.

The contract is probably the largest so far awarded to British companies on the Trident nuclear system. It was first mentioned in public, without details, in evidence last week to the House of Commons Defence Committee.

Officials then told the all-party body that, although the MoD was committed to contracts worth about £1.25bn, only some £300m had so far been spent. Between £250m-£300m will be spent next year with rapidly increasing sums thereafter. The overall cost of Trident is now estimated at over £10.5bn over 15-20 years.

Last week the officials made it clear that if Trident were to be cancelled – which was not the Government's intention – the sonar development would continue for ultimate deployment in Britain's nuclear-powered hunter-killer submarines.

Plessey Marine has supplied all the sonars for Britain's present Polaris nuclear deterrent submarines as well as for all its hunter-killer boats. The latest submarines in the Trafalgar class are being fitted with the company's 2020 sonar systems.

The MoD has classified details of the new sonar as well as likely timing and cost of later production contracts.

Otis Elevator subsidiaries in merger

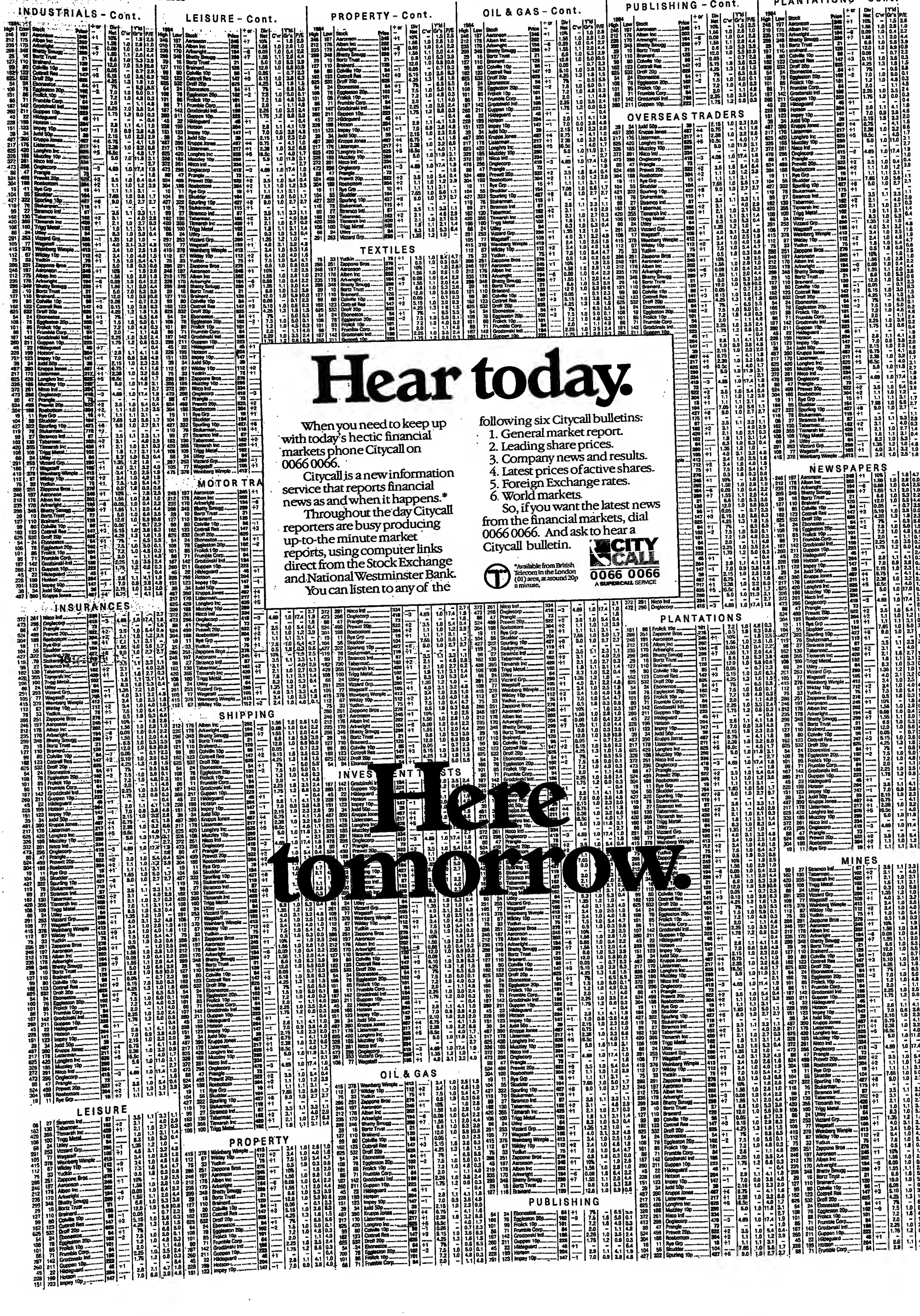
By Richard Tomkins

TWO lift-making subsidiaries of Otis Elevator – Wm. Wadsworth & Sons of Bolton, Lancashire, and Becker Lifts of Wembley, north London – have merged to form the fifth biggest lift manufacturer in Britain.

The company, to be called Wadsworth Becker Lifts, will be based at Wadsworth's Bolton headquarters and will employ 744.

Becker was taken over by Otis in February 1980 and Wadsworth in 1981, but they had retained their separate identities: Becker as a manufacturer of hydraulic lifts for hospitals, offices and flats and Wadsworth as a specialist in heavy-duty lifts for warehouses, factories and foundries.

Mr Jeremy Brace, marketing director of Wadsworth Becker, said both companies had been successful under Otis but a merger offered the opportunity to raise productivity and profitability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UK NEWS

Robots prove mixed blessing for Vauxhall

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

A ROBOT was trying to fit the roof of an estate car to the body of a three-door saloon as Mr John Fleming, chairman of Vauxhall, strolled down the production line at his Ellesmere Port assembly plant on Merseyside.

The computer – part of £25m-worth of high-tech equipment installed at the factory – whose job it was to bring all the right components together et the right time, had become temporarily brain-damaged by bugs in the software with which it had been programmed.

Every car manufacturer knows that new equipment takes time to "shake down." But some takes longer than others.

For example, by all accounts Volkswagen's monument to high-tech production technology, Hall 54 at Wolfsburg in West Germany, where the company claims to have pushed automation further down the car assembly process than ever before and where 250 robots are employed building the new Golf, has also been plagued by start-up problems that have lasted much longer than forecast.

Vauxhall has found that bringing the Astra into full production has proved much more difficult than it expected. Every time the computers make mistakes, it takes two or three hours for technicians to burrow into the software to find the cause. As Ellesmere Port is producing 21 cars an hour (it should be 29), the losses in units and revenue quickly build up.

The unexpected difficulties at Ellesmere Port contributed greatly to Vauxhall's failure last year to hit its profit target of £34m.

The objective seemed a reasonable one because the company, a subsidiary of General Motors of the U.S., aimed to increase UK sales and car market share to record levels in 1984.

The latter objective was achieved. Registrations rose from 262,141 to 282,835 and share from 14.63 per cent to 16.17 per cent. But the company's net loss increased substantially, from £1.1m to £8.8m.

Mr Fleming pointed out that the Ellesmere Port plant produced only 51,114 cars and vans last year because of the switch from the old Astra to the new one and the worse-than-anticipated start-up problems. But he still had to pay the 5,000 people employed at the factory a total of £80m. "We don't make £1,000 profit per car. So we didn't cover the wages bill."

Vauxhall's financial performance was also badly damaged by three strikes. The metal workers' dispute in West Germany brought to a halt for eight weeks last summer the factories operated by GM's Opel subsidiary there. Opel provides most of the components and kits from which Vauxhall assembles cars in Britain.

As soon as the German dispute ended, there was a docks strike in some UK ports which prevented a fast resumption of supplies. Mr Fleming said that the combined cost of those two disputes was about £8m.

Disruptions caused by stoppages during Vauxhall's own pay negotiations last October cost a further £7m.

Ironically, the Ellesmere Port robots made the hangover from the West German strikes that much worse. As the German factories struggled hard to turn out as much material as possible, some of the specifications went slightly awry. A human operator could have made allowances and eased parts together. But robots are not that tolerant. They reject any part which does not match the specification they are programmed to accept.

The strikes also hit Vauxhall's Luton factory where the best-selling Cavalier is produced – a plant which regularly reaches 100 per cent of scheduled output.

The other element in Vauxhall's financial setback was the upsurge of competition in the UK new car market last year which caused the company to spend £13.6m more than it had planned on extra bonuses and incentives for dealers and customers.

So far this year the competitive atmosphere has not been so heated, mainly because Ford, the market leader, has no special incentives on 1985 versions of the Sierra. It seems willing to allow that car to find its own level in the market based on its quality and appeal, rather than attempting to lift sales through deals and incentives.

Mr Fleming insists that Vauxhall's objective is to boost its registrations by 11 per cent to 315,000

Sue Cameron on the growing concern in Whitehall over the role of ministers' advisers

Top civil servants fear political neutrality at risk

INSIDE WHITEHALL today a growing number of Britain's top civil servants believes that the once-proud tradition of political neutrality is in jeopardy.

They claim that top Civil Service jobs go only to those who sympathise with the policies of the Thatcher Government. They say that the quality of the advice being given to ministers is suffering as e result, with politicians being told only what their civil servants think they want to hear.

Reports that the Prime Minister always asks if a senior official is "one of us" before deciding on his promotion prospects are widely believed in Whitehall where, it is sometimes argued, the status of Britain's civil servants is being reduced to little better than political serfdom.

Not all of Whitehall's "mandarins" are critical of the Government. Some say that good civil servants have always had to be politically sensitive and that their advice has been tailored to the objectives of the government of the day – anything else would be a waste of everyone's time.

They insist that today's ministers do not mind tough talking from their officials and that the Prime Minister, in particular, appreciates strength of character in her civil servants.

They wonder aloud if personal dislike of the present Government's programme or personal worries about promotion may be at the heart of claims that the Civil Service is being party politicised.

Britain is almost alone among Western democracies in having a Civil Service that has always claimed to stand totally aloof from party politics.

As Dr William Plowden, a former senior Whitehall official who is now director-general of the Royal Institute of Public Administration, put it: "Britain is not West Germany or France where the arrival of a Kohl or e Mitterrand brings a small but significant shuffling around of top jobs; still less is it the U.S. where the arrival of a new president means a mass exodus of his predecessor's advisers."

In the UK the theory was, he said, that "any civil servant is capable of doing any job at his level, that he can do it for any politician of any party and that it has traditionally not been felt appropriate for ministers to play any real part in matters of personnel management or movement."

Are senior officials today observing the old ground rules of neutrality and objectivity?

A committee representing members of the First Division Association – the top civil servants' trade union – in the Departments of Transport and the Environment has produced a discussion paper which says: "There is evidence that the traditional even-handedness of very senior officials is being undermined, with some of them arguing privately as well as publicly that there is no conceivable alternative to certain policies."

Pressed to produce the evidence, Mr Patrick Brown, chairman of the committee and an under-secretary in the Department of Transport, talked about the need for civil servants to prepare alternative policy positions for ministers, leaving open some "bolt holes" for their political masters.

Mr Brown said this did not appear to be happening. But he admitted that his evidence was "intangible."

Others who argue that civil servants are merely telling ministers what they want to hear, instead of giving them impartial advice, seem equally short of hard examples. So are they being objective about their own motives?

"I think some officials simply don't like the policies of the present Government," remarked one senior Whitehall man. "I don't think officials are failing to be frank with ministers. Nor do I think that ministers today are unwilling to listen."

A mandarin in another department agreed that the Civil Service was not being politicised in the sense that "only party hacks are being given preferment." But he added that, in a sense, officials had always been politicised.

Mrs Thatcher: said to respect strength of character

"You've always had to be politically sensitive to do well in the Service," he said. "If you were not prepared to change your spots to some extent, then you wouldn't do well. I've never had any difficulty in changing course when a new government has come in. I think you've always had to be prepared to prostitute yourself as a civil servant. If you're not, you shouldn't have joined in the first place.

"The only striking thing today is that the present Prime Minister takes more interest in senior appointments. But I've never heard anyone say that those she has appointed aren't extremely capable people."

Some admit that it was easier to change your spots in the days before the Thatcher Government, when there was less divergence between the policies of the main parties, when consensus politics were the order of the day.

Mr Brown, for example, pointed out that consensus government had meant a much narrower range of policy options, no matter which party was in power.

Professor Fred Ridley, Professor of political theory and institutions at Liverpool University, believes some Whitehall mandarins are still wedded to a belief in consensus government.

"The present Conservative ministers aren't interested in whether or not their senior officials are Tories," Professor Ridley said. "But they do want them to be committed to the government policies they are working on within their own Whitehall departments – committed in a general sense, not in party political terms.

"I believe there is a split among top officials. Some of them think it right that they should be committed to the policies of the government of the day. Others reckon it is their job to 'educate' ministers so as to keep everyone in the middle of the road."

Perhaps the root cause of complaint is that civil servants have less influence over a radical government than a centrist one. Such a grievance could never be stated overtly, because it would go against the whole Whitehall ethos.

"Time was when ministers would set out their broad objectives, ask officials how to achieve them and – up to a point – ask officials whether they should be pursuing them at all," said one senior Whitehall man who retired last year. "But these present ministers have very definite, detailed ideas of their own. They want officials only to do the menial job of putting their ideas into practice. Therefore, they are looking for sympathetic people."

The present Government is not the first to prefer its senior officials sympathetic – or to give a wide berth to those who seem determined to question its policies. Some of the leading figures in the Labour governments of the 1970s, such as Mr Richard Crossman and Mr Tony Benn, made no secret of the deep suspicion in which they sometimes held their civil servants.

Today much is made of the way Mrs Thatcher has apparently put her own men into top Civil Service jobs – men such as Sir Clive Whitmore and Sir Peter Middleton, permanent secretaries at, respectively, the Ministry of Defence and tha Treasury. Yet one of the things that is said to have appealed to her about the latter was the forthright way he argued with her over Common Market budgetary policy.

Where does this leave young, able ambitious civil servants? What should they do if they find themselves opposed to the department's policies under a particular government? The arguments have been given a keener edge by the acquittal last month of Mr Clive Ponting, the Ministry of Defence official charged under the Official Secrets Act for leaking documents to an MP.

Most civil servants believe Mr Ponting should have followed the traditional rules for officials who find themselves totally opposed to what their ministers are doing. The rule has always been that an official should take his doubts to his Permanent Secretary, the Civil Service head of his department. If his difficulties cannot be resolved, he should ask to be moved to another post. If that is not possible, he should resign.

An honourable theory – but one which works in practice only if the civil servant concerned carries his point. But if his complaint amounts to a general dislike of a particular government's policies, he is almost certain to be marked down as "unsound" by Civil Service career managers.

If the politicisation of the Civil Service is, after all, a myth created by discontented officials, surely it would then be a mistake to think about abandoning the tried and tested neutrality of Britain's Civil Service?

Few think so. Even senior officials who insist that civil servants are not being brought into the party political arena fear that it could happen. They believe there is a risk that, when the Conservative Government falls and another party comes to power, the new administration will set about axing those mandarins whom it sees as Thatcher sympathisers.

System in other countries varies sharply

TOP OFFICIALS in other Western nations are not expected to observe the same traditions of political neutrality as their British counterparts. The quid-pro-quo is that they do not enjoy the same security of tenure as UK civil servants.

The sharpest contrast is with the U.S., where the advent of a new administration means a huge turnover in civil servants. An incoming president dismisses many of his predecessor's officials and puts in his own people, who have been publicly identified with his political views.

Small wonder that Americans tend to talk not of politicians and civil servants but of elected officials and appointed officials. Some hang on to their jobs – but not many at senior levels.

In continental Europe there tends to be much greater continuity. Civil servants, however, are usually free to flaunt their personal party political allegiances – something that is anathema to Whitehall traditionalists.

In both France and West Germany senior civil servants – those roughly equivalent in rank to the top three tiers of the Whitehall hierarchy – can be dismissed by an elected minister.

Professor Fred Ridley of Liverpool University points out that a fair number of French and West German mandarins keep their posts even when there is a change of government. He emphasises that it is the politically sensitive jobs, which involve giving advice to ministers on policy, where personnel changes are most likely to occur. Other posts, although high ranking, may be uncontroversial.

A similar distinction between types of jobs can be drawn in Whitehall. On the personality front, a good permanent secretary in Whitehall will always ensure that ministers are not advised by people whom they clearly dislike.

One of the key points about both the French and German systems is that top officials are in no danger of losing their jobs if a new minister finds them or their politics unacceptable. In West Germany, civil service jobs up to the level of an undersecretary in the UK – third from the top – are protected from interference by politicians in much the same way as in Whitehall.

Until that level there is also a formal promotion system, similar to that of the British Civil Service. Officials are free to turn down promotion to the small number of top jobs where tenure is at the whim of elected ministers.

If a high-ranking West German mandarin is shown the door by his political master, he can go into "temporary retirement" which involves only a small reduction in pay.

In France, an official who is no longer wanted as a ministerial adviser will automatically be offered another, less sensitive post in the national administrative framework. For example, the election of the Mitterrand Government led to a massive turnover in prefects who act as provincial governors. But all that happened was that they were moved to do the same job in a different region.

French and German civil servants also have the same rights as other citizens to comment publicly on how the government is performing.

"In both countries an official must exercise proper discretion when talking about the affairs of his own ministers," Professor Ridley says. "But that's no different from the moderation and restraint that would be expected of a businessman talking about his own company."

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Letters to the Editor

Cash and profit sharing

From the Chairman, John Lewis Partnership

Sir,—May I support the suggestion in Mr Brittan's article (February 25) that tax concessions should be extended to profit sharing in the form of cash rather than confined, as at present, to ordinary share schemes?

The John Lewis Partnership's arrangements give its 27,000 members a 100 per cent interest in 100 per cent of its income but only a collective interest in its capital. For 1983 £25m of profit-related bonus was distributed to our members in cash at a rate of 21 per cent of their pay. These arrangements plainly lead to a degree of commitment to the business that is at least as great as that engendered by any share-based scheme under which only a small fraction of profits is distributed to employees.

Successive chancellors have failed to see that, if genuine profit sharing is to be encouraged, it makes no sense to give tax concessions to the latter but not to full-blooded schemes such as the Partnership's. Perhaps tha Government does not yet want to be convinced that at work it is profit sharing that matters, not individual share *ownership.*

P. T. Lewis.
Oxford Street, W1.

Commercial power

From the Chairman, Tesco

Sir,—Tesco *is reluctant to* take issue with Sir Derrick Holden-Brown (February 26) who claims "abuses of commarcial power" on the part of food retailers because we believe that the prime objective of the food industry as a whole is to work in a unified way in the interest of its customers.

Sir Derrick's divisiva remarks however, and slurs against food retailers in his speech at the Food Manufacturers' Federation conference should not be allowed to go unanswered. We feel sure that he cannot be representing the view of well-informed and enlightened food manufacturers.

Tesco executives do not exert any "unfair pressure" on suppliers. The Monopolies and Mergers Commission report of 1981, "Discounts to retailers," was clear then and still is. It said that the multiples were more efficient, that they had improved their performance in recent years, and that they were making a contribution to the containing of food price inflation.

We have grown accustomed to pressure from some manufacturers and small retailers who seen themselves as disadvantaged compared with the major, successful multiples. They must recognise that the retail industry is in e state of constant change. Tesco, for one, is "moving to take advantage of shifting consumer taste within the market."

We have always been innovative both in the creation of new products whether brand or own-label and in the way they are sold. We have always recognised that we must develop our business in line with the developing market and with the changing and increasingly sophisticated needs of the consumer. We have always recognised that it is to tha benefit of the industry and to the benefit of its customers if suppliers, distribntors and retailers work together to improve the "total offer" to the customer.

There is no need for clearer rules and regulations to make this happen.

(Sir) Leslie Porter.
P.O. Box 18, Delamare Road, Cheshunt, Waltham Cross, Herts.

Salaries in the real world

From the Managing Director, Durst (UK)

Sir,—The arithmetic of *theoretical economics must,* at times, be permitted to soar beyond tha realms of "common sense" and the "real world," if it is to flourish at all. Mr Samuel Brittan's review (February 25) of Professor Weitzman's approach to "profit sharing," however, is one of those occasions where indulgence is a vice and sbonld be terminated before nonsense takes root.

To assume that salaries in the real world would fall or rise in line with a percentage of "value added" is as naive as the belief that a fall in the pound automatically increases exports. Both assumptions predict future behaviour solely on the basis of one factor: price. In the latter case the export customer, like any other, will buy our "goods and services" if they are sufficiently attractive for his purpose at a price he is prepared to pay. In the former, and Mr Brittan really stretches credibility to the limit, notwithstanding his brushing-off comment that "the issue involves all the *outstanding* problems of macro and micro economics" by appearing to ignore utterly the following practical difficulties:

By and large employees plan their own *expenditure* commitments on a fixed income basis. They react very emotionally if their income is subject to uncertain changes, particularly downward ones, on some theoretical basis which they, and usually their supervisors, do not understand.

Taking the given example of a "marginal" new employee recruited at £120 what happens to the existing employee? Does he remain at £180 or drop to the new marginal rate? His reaction may have some bearing on the organisation's decision to expand employment.

A related problem results from the suggested piecemeal introduction of such a scheme. What will be the reaction of other organisations which compete for the same skills? They will not necessarily reduce their rates in the face of an im*proved supply* of *applicants* with the required skills who are trying to maintain a higher, stable income.

How do Professor Weitzman and Mr Brittan propose actually to measure "added value"? It is a constantly moving target at best, both in time and place. How will it be assessed as between products, departments, companies, groups, or indeed, at all in service organisations and public employment?

What bappens when the two-*thirds* share of marginal "added value" falls below the "social wage"? We already have many young school leavers who reject a training scheme place at £26 per week in favour of the dole at £17.

One could drive other practical nails Into their particular notional coffin, I think.

M. J. L. Willard.
Felstead Road, Longmead Industrial Estate, Epsom, Surrey.

Second class sector

From Mr S. Mendham.

Sir,—Ian Hamilton Fazey's interesting summary of deregulating small business (February 22) raises two very important questions.

Was the Rayner-type scrutiny committee charged with investigating the deregulation of all businesses or the deregulation of small businesses? If it was the latter, then clearly there is a dilemma, because our society would be faced with second class customers and second class employees, who would get a better deal from PLCs than from small *businesses.*

How do wa reduce the administrative burden on small businesses without deregulation? The answer is simplification of the existing regulations. Computerisation has proven that big businesses hava further improved their ability to deal with the amount of existing regulations. Small businesses, on the other hand, mainly deal with the administrative detail manually, and, what is worse, our work shows that some 95 per cent of small business owners do this work themselves.

When we bave the answer to the first question, the answer to the second question will probably be a standard set of forms produced by the appropriate government departments, for use by small *businesses.* The forms would prompt the businessman to complete only the necessary information and would satisfy all of his duties and responsibilities.

S. Mendham,
Forum of Private Business,
Ruskin Chambers, Drury Lane, Knutsford, Cheshire.

The Stansted poll

From the Managing Director, MORI

Sir,—Mr J. Wagener of Stansted Mountfitchet (February 28) puts the question "Are Brtish Airports Authority and the Mori organisation satisfied that a small sub-sample of 190 people from (adjacent) districts (to Stansted) Is representative of opinion In this area?" Tha answer is: "Yes." In fact, the sub-sample is from a very mucb larger sample of over 1,000 people in the constituency and replies indicate that the answers to the questions from thé sub-sample have a greater reliability than the plus or minus 6 per cent we would normally expect from the random sample in the area. The finding I found particularly interesting was that although residents in the area are more likely than those in the wider sample to say that limited expansion of tha airport would increase noise and traffic congestion, they were nonetheless more in agreement that the proposd *expansion would* be good overall for the area.

Robert Worcester,
32, Old Street, SW1.

Cuckoo or lemming?

From Mr J. Thornton.

Sir,—The person at my Tube station who bas been collecting money for the miners was today collecting for the teachers. Is this the first cuckoo of spring or the gathering of the lemmings?

Jonathan Thornton.
79, Woodland Gardens, N10.

Company Notices

SOCIETE GENERALE

French "Société Anonyme"
Capital:
French Francs 1 250 000 000
Head Office:
29, boulevard Haussmann
Paris 9e, France
Commercial Register:
Paris B 552 120 222

FIRST NOTICE TO HOLDERS OF FLOATING RATE NOTES 1984-1994 OF U.S.$10.000 EACH
TO HOLDERS OF 14% SUBORDINATED NOTES 1984-1991 OF U.S.$1.000 EACH
AND TO HOLDERS OF SUBORDINATED RATE NOTES 1984-1994 OF U.S.$10.000 EACH

The Holders of International notes hereinafter specified issued by SOCIETE GENERALE are convened to an Ordinary General Meeting to be held at 50, boulevard Haussmann, Paris 9ème (France) on March 27, 1985:
—at 3 p.m. for the holders of floating rate notes 1984-1994 of U.S.$10.000 each;
—at 3.30 pm for the holders of 14% subordinated notes 1984-1991 of U.S.$1.000 each;
—at 4 p.m. for the holders of subordinated rate notes 1984-1994 of U.S.$10,000 each
in order to consider the following agenda:
—Appointment of the noteholders' permanent representatives, designation of the substitute representatives;
—Determination of the noteholders' representatives' powers and the remuneration given to the permanent representatives.

To permit the noteholders to attend or to be represented at these meetings, the notes or their deposit receipts must be deposited at least five days before the date fixed for the meeting, at the offices of the banks having participated in the placing of these notes and from whom proxies or admission cards can be requested. These meetings shall be validly held if the holders of twenty-five per cent of the outstanding notes are present in person or represented.

THE BOARD OF DIRECTORS.

BANQUE NATIONALE DE PARIS

Floating Rate Note Issua of US$400,000,000
September 1983/91

The rate of interest applicable for the period beginning March 4th, 1985 snd set by the referenca agent is $10\frac{7}{16}$% annually.

PIONEER ELECTRONIC CORPORATION

NOTICE IS HEREBY GIVEN to holders of CDR's issued by Caribbean Depositary Co., N.V., Curacao, evidencing shares in the above company that the "First quarter report 1985" of Pioneer Electronic Corporation may be obtained from:
Pierson, Heldring & Pierson N.V.
Herengracht 214,
Amsterdam,
and
The Bank of Tokyo Ltd.,
established in: Tokyo, Bruxelles, London, Dusseldorf, Paris and New York.
Amsterdam, February 25, 1985.
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The undersigned, being the Agent of Caribbean Depositary Company N.V., announces that Pioneer Electronic Corporation has declared a cash dividend of Yen 25 per share for the financial year covering the period 1st October, 1983-30th September, 1984, which will be payable as from 6th March, 1985 at the office of the undersigned. This distribution which has been converted into U.S. dollars pursuant to section 4 of the Deposit Agreement, will be available to holders of CDR's against surrender of Coupon No. 25 less 20% Japanese withholding tax, to the effect that per CDR evidencing
5 Depositary Shares $3.93 ($4.18)
10 Depositary Shares $7.88 ($8.36) and
100 Depositary Shares $78.60 ($83.60) is paid

The amounts stated between brackets represent the dividend less 15% Japanese tax. These dividends will be paid until 3rd May, 1985 but only on condition that the coupons to be surrendered will be accompanied by an "Affidavit" (obtainable with the undersigned), evidencing that the beneficial holders of the CDR's are residents of a country which has concluded a Tax Treaty with Japan.

In the Netherlands dividends will be paid to residents in Netherlands currency at the daily rate of exchange unless otherwise instructed.

PIERSON, HELDRING & PIERSON N.V.
Amsterdam, 25 February 1985.

NOTICE TO HOLDERS OF SANKYO SEIKI MFG. CO. LTD. 3¼% CONVERTIBLE BONDS DUE 1991

Pursuant to the provision of Article 5(D) on conditions of bonds under which the above bonds were issued, Notice is hereby given as follows:-
1. On February 25th 1985 the Board of Directors of the Company resolved to make a free distribution of shares of its common stock to shareholders of record as of March 31st, 1985, at the rate of 15 new shares for 100 shares held.
2. Accordingly, the conversion price at which the above bonds may be converted into shares of common stock of the company will be adjusted effective in Japan, 1st April 1985. The conversion price in effect prior to such adjustment is Yen 1,555.50 per share of common stock and the adjusted conversion price is Yen 1,335.20 per share of common stock

SANKYO SEIKI MFG. CO. LTD.
Dated: 4th March, 1985.
LTCB OF JAPAN LTD.,
London Office.
Principal Paying and Conversion Agent.

IN PARLIAMENT
SESSION 1983-84

NOTICE TO HOLDERS OF EUROPEAN DEPOSITARY RECEIPTS (EDR's) IN FUJITSU LIMITED

NOTICE IS GIVEN that at a Meeting of the Board of Directors of Fujitsu Limited held on 22nd February, 1985 it was RESOLVED that a free distribution of Shares be made to Shareholders in the ratio of 0.10 Share for each Common Share of Y50 each (1 New for each 10 Old) as of record 31st March, 1985. All New Shares not aggregating 1,000 Shares or a multiple thereof will be sold and the proceeds distributed to Shareholders at an amount per share to be announced at a later date.

Furthermore, it has been declared that the shares will be traded Ex-Rights on the Tokyo Stock Exchange with effect from 27th March, 1985.

Coupon No. 10 will be used for the collection of Free Shares which may be collected on or after 20th May, 1985 from the Depositary.

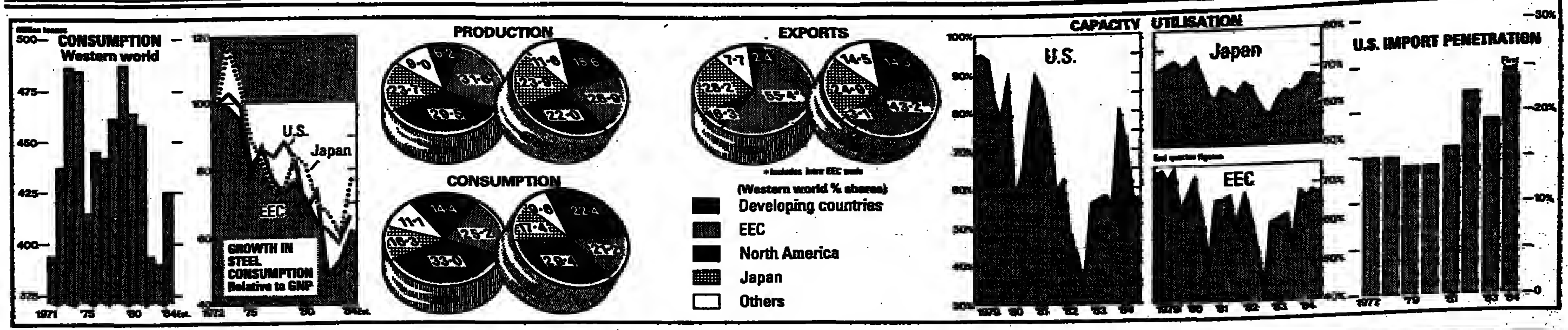
KLEINWORT, BENSON LIMITED
LONDON
Depositary

NIPPON MEAT PACKERS, INC. (CDRs)

The undersigned announces that the Annual Report year ended July 31, 1984 of Nippon Meat Packers, Inc., will be available in Luxembourg at: Kredietbank S.A. Luxembourgeoise, Luxembourg
and further in Amsterdam at:
Algemene Bank Nederland N.V.
Amsterdam-Rotterdam Bank N.V.
Bank Mees & Hope NV.
Pierson, Heldring & Pierson N.V.
Kas-Associatie N.V.
Amsterdam, 20th February, 1985.
AMSTERDAM DEPOSITRY COMPANY NV

Clubs

STATISTICAL TRENDS: STEEL



Further rationalisation on the agenda

AFTER FOUR years of falling demand for steel, consumption in the West rose by an estimated 9 per cent in 1984 on the back of the world economic recovery. Production rose 9.5 per cent to 446m tonnes which brought some relief to hard pressed steel producers but left the level of production 10 per cent below the 1974 figure of 494m tonnes.

Although the economic recovery and the increase in steel consumption was greatest in the U.S., the upturn there in demand is tempered by two pressures: producers are caught between the effect of the strong dollar on their competitive position against other industrialised countries, and the growth in exports from the developing countries such as South Korea and Brazil with their lower wage rates.

The substantial rise in consumption of steel in 1984 is not expected to continue, with little growth forecast for the next few years except in the developing countries whose share of world consumption has increased from 14 per cent in 1974 to 23 per cent in 1984.

Consumption relative to real GNP in the industrialised countries has fallen over the last decade to around 65 per cent of its value in 1973, with the fall in the U.S. being even more marked reaching 60 per cent of its 1973 value.

Improved steel quality and better engineering have reduced the weight of steel used in most applications.

Other materials have been substituted for steel in manufactured products, for example aluminium in cans. However, new production technology could reduce cost and improve quality enabling steel to regain such markets.

The developing countries such as South Korea and Brazil have increased substantially their production, and share of world exports—over 50 per cent of South Korea's production being exported, threatening Japan's traditional Asian markets and causing problems for U.S. steelmakers.

Steel consumption in the U.S. grew by nearly 20m tonnes—19 per cent—in 1984 while production increased by only 10 per cent. Imports have been sucked into the U.S. as a result of dollar strength against its main competitors in the industrialised countries and higher production costs. (All the industrialised countries face much higher labour costs than those in the developing countries—from five to 10 times high.)

U.S. steel imports rose to 24 per cent of consumption in the first half of 1984. Developing countries took 37 per cent of those imports with half of that 37 per cent coming from South Korea and Brazil. Japan's share of U.S. imports has fallen from nearly 50 per cent in 1975 to 25 per cent in 1983.

Recent developments to arrange agreements to reduce imports to the U.S. to below 20 per cent of the domestic market may bring some relief to U.S. producers but could pose a problem for the developing countries such as Brazil and Mexico with their need to export to earn foreign currency to meet debt interest payments.

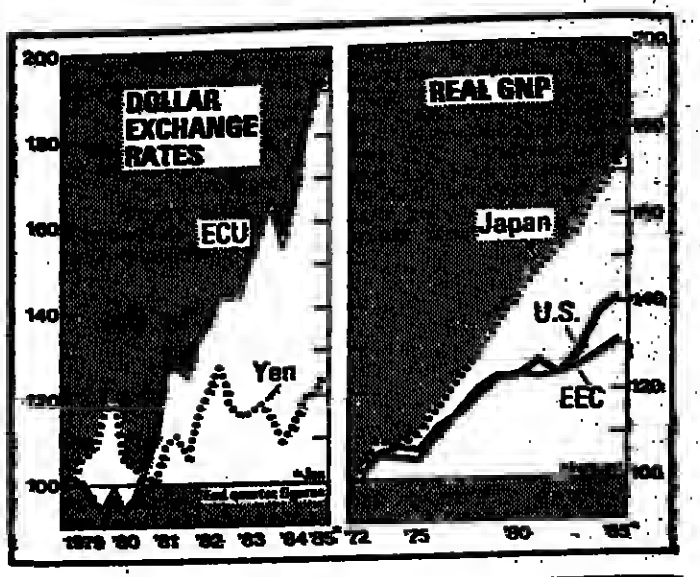
Despite the upturn in production, capacity utilisation languishes at around 65/70 per cent. Following a surge to 80 per cent in the U.S. in the first half of 1984, the third-quarter figure fell back to 55/60 per cent. Excess capacity in the west of around 200m tonnes is more than adequate to meet even the most optimistic estimates of growth in consumption which given a strong cyclical peak year would need no more than 500m tonnes in the West in 1990.

This puts pressure on companies in the industrialised countries for mergers to reduce capacity, and to introduce technological change to produce higher quality steel products.

Both employers and employees have suffered from the recession in the steel industry. Main Japanese producers have seen profits decline and even turn into losses; U.S. producers have seen losses mount. Interim results for 1984 show a reversal of the trend but there is a steep climb ahead if regular profits are to be made.

Employment in the steel industry has fallen sharply in the U.S. and Europe. The numbers employed in the EEC steel industry dropped from 780,000 in 1975 to 490,000 in 1983, while in the U.S. employment fell to 243,000 last year from an average of 453,000 in 1975/79.

Commentary by Our Economics Staff; data analysis by Financial Times Statistics Unit; charts and graphs by Financial Times Graphics Department.



TOP 10 PRODUCERS

1983

	Company	Output (million tonnes)
1	Nippon Steel	26.9
2	U.S. Steel	13.4
3	British Steel	12.7
4	Finsider	12.2
5	Nippon Kokan	11.4
6	Kawasaki Steel	10.4
7	Sumitomo	10.3
8	Thyssen	10.0
9	Bethlehem	9.7
10	Usinor	9.0

Source: IISI

INDUSTRIAL PRODUCTION

	U.S.	Japan	EEC
1971	100	100	100
72	109	103	104
73	118	123	112
74	118	118	113
75	108	105	106
76	119	117	113
77	126	122	116
78	133	130	119
79	139	139	124
80	134	146	124
81	138	147	121
82	127	148	119
83	136	163	120
84	149	168	123

Source: Eurostat, IMF

TRADE % PRODUCTION
(Western world)

1972	26.8	1978	33.2
73	26.3	79	32.2
74	30.0	80	33.8
75	29.6	81	34.4
76	30.8	82	37.5
77	31.9	83	39.6

Source: IISI

EXPORTS % OF PRODUCTION

	South Korea	Mexico	Brazil
1977	34	5	4
78	40	6	9
79	50	4	12
80	64	1	12
81	53	1	17
82	56	5	22
83	57	15	42

Source: IISI

LABOUR COSTS

(Total Compensation) Index U.S.=100

	1975	1983
U.S.	100	100
Japan	46	51
Germany	83	75
UK	36	39
France	43	52
South Korea	5	6
Mexico	15	22

Source: U.S. Bureau of Labor

COMPANY RESULTS

Net earnings — end March bn Yen

	1980	1981	1982	1983	1984
Nippon Steel	116	76	58	36	1
Nippon Kokan	29	33	31	26	−10
Kawasaki Steel	80	57	32	73	1
Sumitomo	42	49	38	32	−10

End Dec. bn $

	1980	1981	1982	1983
Bethlehem	0.12	0.21	−1.47	−0.16
U.S. Steel	0.46	1.08	−0.36	−1.16

End Sept million DM

	1980	1981	1982	1983
Thyssen	110	−70	−66	−556

Source: Capital International

STEEL PRODUCTION

(million tonnes)

	Western World	U.S.	Japan	EEC	Brazil	Mexico	South Korea
1972	434	121	97	140	6.5	4.4	0.6
1973	481	137	119	151	7.2	4.8	1.2
1974	494	132	117	157	7.5	5.1	1.9
1975	424	106	102	126	8.4	5.3	2.0
1976	453	116	108	135	9.3	5.3	3.5
1977	443	114	102	122	11.3	5.6	4.3
1978	488	124	102	133	12.2	6.8	5.0
1979	497	124	112	141	13.9	7.1	7.6
1980	464	101	111	129	15.3	7.2	8.6
1981	480	110	102	126	13.2	7.7	10.8
1982	399	88	100	111	13.0	7.1	11.8
1983	407	77	97	110	14.7	6.9	11.9
1984	446	85	106	119	18.4	7.5	13.0

Source: IISI

EXPORTS (semi finished and finished steel products million tonnes)

	U.S.	Japan	EEC	Brazil	S. Korea	Mexico
1973	3.7	24.8	54.5	0.4	0.8	0.1
74	6.4	32.2	62.8	0.3	1.2	0.1
75	2.8	28.9	51.2	0.2	0.9	0.1
76	2.5	36.0	50.8	0.3	1.4	0.2
77	1.9	33.4	53.4	0.4	1.3	0.2
78	2.3	30.5	61.0	0.9	1.6	0.4
79	2.7	30.7	62.3	1.5	3.2	0.3
80	3.7	29.7	59.4	1.5	4.5	0.1
81	2.7	28.5	61.5	1.8	4.7	0.
82	1.7	28.6	52.4	2.3	5.5	0.3
83	1.1	30.9	53.5	5.2	5.7	0.8

Source: IISI

STEEL CONSUMPTION

Million tonnes equivalent

	Western world	U.S.	Japan	EEC	Developing countries
1974	485	144	79	122	70
75	415	117	68	99	68
76	446	130	65	116	72
77	442	134	63	106	82
78	462	146	67	102	92
79	468	141	78	112	97
80	465	116	79	104	104
81	466	130	71	93	106
82	394	84	70	90	96
83	390	96	66	85	92
84†	425	112	74	90	95

†Estimates. Source: IISI

COMPETITIVENESS* OF MAIN PRODUCERS

Index 1980=100

End of year	U.S.	Japan	UK	Germany	France
1978	96	115	82	102	100
1979	101	92	91	105	104
1980	108	105	104	94	98
1981	115	103	56	93	93
1982	129	96	97	96	88
1983	133	108	93	94	85
1984	142	102	87	88	87

* Adjusted for price inflation and exchange rate shifts.
Source: Anthony Bird Associates

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هكذا من الأصل

MASTERY OF THIN FILM TECHNIQUES IS THE SECRET

How IBM drove ahead in disk drives

BY LOUISE KEHOE IN SAN MATEO, CALIFORNIA

IBM, DESPITE its domination of the computer industry, is not known as a technology leader. In personal computers, for example, Big Blne's products have been called "plain vanilla" by competitors who claim their products are more innovative.

One exception, that proves the rule, is IBM's disk drive storage technology for mainframe computers. IBM has consistently driven ahead in techniques for storing more data more densely in these mainframe peripheral units, leaving competitors in the dust.

With its latest disk drive enhancements, announced in February, IBM has again overtaken the performance of units offered by "plug-compatible" manufacturers, who only recently caught up with IBM's previous product announcement of the "3380" model in 1981.

Now IBM'e "enhanced model 3380s" offer double the data capacity of the original models and improve the rate at which data is transferred from the storage unit to the computer by 15 per cent. Both improvements set a new challenge for competitors.

Not that IBM needs to rush to keep ahead in disk drive technology. Indeed, with approximately 90 per cent of the market in hand, IBM could almost forget about competition. But even 10 per cent of a $3bn market is worth pursuing, especially when it represents a foot in the door of the corporate mainframe computer room for whichever manufacturer supplies the disk drive units.

The two major "plug-compatible" mainframe computer suppliers, National Advanced Systems (NAS) and Amdahl, both compete with IBM for disk drive sales. NAS offers units made by Hitachi and Amdahl's disks come from Fujitsu. Memorex, a unit of Burroughs corporation, is the sole remaining U.S. plug-compatible disk maker.

Storage Technology Corporation, a one-time leader in the field, is now in bankruptcy. Control Data Corporation withdrew from the market last year.

Confounding would-be IBM competitors in the disk drive business is IBM's technology for making the magnetic "heads" that read and write data on to the storage disks — conceptually akin to the stylus of a stereo player. Conventional data storage disks use ferrite heads that are machined to very close tolerances.

With the introduction of the 3380 in 1982, IBM unveiled a new kind of read/write bead made nsing the techniques of integrated circuit production. The "thin film" bead can fecus mere finely ento the data recording track of a storage disk. This becomes increasingly important as the number nf data tracks per disk is raised to cram in more data.

Thin-film heads, as the name implies, beve micro-layers of metal formed using photolithography, etching and sputtering—just like the metallic connections of an integrated circuit. Two technical problems prompted the development of thin-film heeds. The first was the difficult in controlling the dimensions of a ferrite head to the closest micron. Secondly, ferrite heads loose some of their ebility to magnetise (magnetic permeebility) et high frequencies. As the number of data bits per inch read by the head as it travels around the disk increases, ferrite heads begin to loose this essential ability.

To make matters worse, as bit densities go np the signals used to store a bit of information become increasingly small. That means the head must ride closer to the disk to detect the signals. To do that, it must be very finely crafted.

The original IBM 3370 was the first disk drive with a thin-film head. It stored abont 2bn characters of data, whereas the new double density models announced this month will store up to 5.04bn characters. To increase the data capacity, recording tracks have been narrowed to around 1,400 per inch from 800 per inch on the original models.

"You den't have to use thin film heads et these deta densities," says disk technology expert James Porter of Disk/Trend Inc. Hitachi and Fujitsn have chosen to stay with conventional ferrite technology which provides more consistent performance and is easier (and cheaper) to make.

The Japanese producers will, however, be forced to rethink their "head" technology soon, predicts Mr Porter. As data density continues to increase to satisfy computer-users' hunger for storage, the limits of ferrite disk heads will soon be reached. "They have, perbaps, a couple of prodoct generations to go," predicts Mr Porter. The Japanese producers still have to "pay their dues" to convert to thin-film technology, he believes.

That conversion has proved costly and trouble prone for American producers. Memorex, which is employing thin film heads in its 3380 competible drives, has had trouble mass producing them, eccording to industry reports. The company was forced to suspend production temporarily last fall due to problems with its new disk beads.

Storage Technology was another U.S. disk maker that "bit the bullet" by investing in thin-film production equipment. While the problems that finally led Storage Technology into bankruptcy last year were complex, the "horreodous capital expense" involved in equipment to make thin-film heads did not help, suggests a competitor.

Industry reports suggest that the high cost of semicondnctor production-type equipment needed to make thin-film heads was also a fector in Control Deta's decision to withdraw from the market.

Costs aside, thin-film depositinn is an unfamiliar and tricky technology for the disk makers. "Even IBM took 14 months to ship the 3380 after its announcement," recalls Mr Porter. Difficulties in obtaining consistently reliable thin-film heads are believed to have delayed the product. Plug-compatible makers took even longer—around two years—to match the performance of the 3380. The delay cost them market share as well as revennes.

Converting to thin-film technology is "an investment decision, not e technology-development problem," says Ken Page, vice-president of Netional Advanced Systems, which markets Hitachi plug-compatible disk drives. The Japanese company has already developed thin-film head technology but prefers to use ferrite heads in current products he claims. One advantage of deferring the switch to thin-film heads is that the technology is maturing." By the time the Japanese introduce thin-film heads they will be better known and understood" points out Mr Porter.

Already, IBM competitors are meving to react to the new drive anneuncemeot. "We will be shipping a double capacity ene year after IBM ships theirs" premises Memorex vice president of domestic operations, Jack Scott. NAS' Ken Page declares that his company will have an equivalent product "a lot quicker than that." NAS is planning to introduce "several peripheral products in the very near future," says Mr Page, although he declined to give details. Amdahl is also expected te make an announcemcot in the near future, say industry analysts.

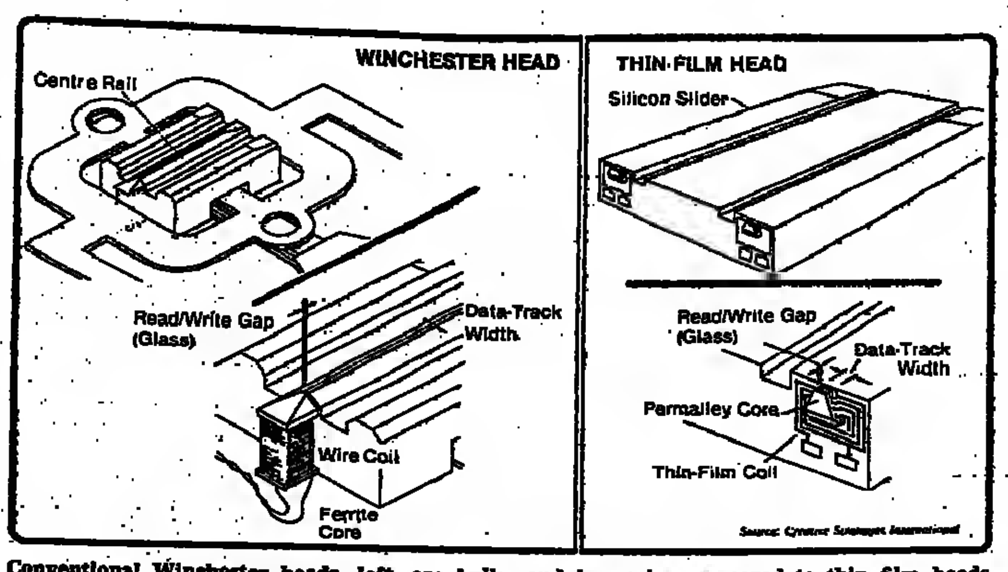
Assuming the new IBM drives beve e product life of 3-4 years, competiters bave until ebout the middle of 1986 to introduce compatible drives if they are to yield profits, Mr Porter estimates.

In some weys IBM's latest announcement will help competitors. IBM bas telegraphed its punches by announcing the double capacity drive now for shipment in the fourth quarter of the year. That gives competitors 9-10 months in which to get their competing product developments under way. "They should be ready six months after IBM ships," says Mr Porter.

On the ether hand, IBM has told customers they can now buy a new version of the single-density 3380 that can later be upgreded to double density, thus capturing customers who want the extre memory capacity.

IBM has also edded "bells and whistles" to its new 3380S that were previously only available from plug compatible makers. "Dual porting" which increases the deta througbput from the drive to the computer (by effectively previding twe "doors" for the deta to pass through) is now available from IBM. With this improvement, IBM has stolen the thunder of competitors who must now compete solely on price.

This latest surge ahead in IBM's disk drive technology is not, however, expected to have the disastrous effects upon competitors of Big Blue's introduction of the thin-film head. The incremental improvement in disk performance and capecity will increase the pressure upon remaining competitors to reassess the potential profits and the increasing costs of staying in a market that is virtually owned by one supplier.



Conventional Winchester heads, left, are bulky and imprecise compared to thin film heads, right, fabricated using chip-making technology.

VEHICLE MANUFACTURE

Superglues for tomorrow's cars

BY ROBIN REEVES, WELSH CORRESPONDENT

A FEW years hence, the average family motor car could be beld together by superglue rather than spot welding and rivets, if current research by the British Steel Corporatien's Welsh Laboratory fulfills its early potential.

Investigations at the laboratory are demonstrating that a new generation of toughened acrylic-based adhesives—provide a stronger, stiffer, bonding of steel sectiooa used in the average motor car than traditional spot weld methods.

Their performance in simulated car crash conditions of up to 30 mph, also matches that of spot welded structures.

Before they ere introdnced to the assembly line, components will have to be redesigned to teke account of the ebility of the new adhesives to withstend aheering stresses rather better than peeling pressures. Bnt leading motor companies in both Europe and North America are already sbowing considerable interest in the BSC Welsb Laboratory work. One maker predicts a significant switch to use of adhesives within the next three to four years.

The attraction of edhesive bonding for motor manufacturers is that it epens the way for greater use of aluminium and plastic components in vehicle construction. These are difficult or impossible to weld. In 1982, BL, for example, unveiled e prototype body which consisted nf an aluminium space frame with plastic outside panels, all edhesively bonded.

But Mr Bryan Jones, research officer at the Welsh Laboratory's production epplication department, is elso confident thet the new bonding technology offers considerable potential edvantages in mild steel body construction.

It fits in well with both modern rohotic assembly techniques and the increasing use of lightweight, high strength steels, now being adopted by motor manufacturers in their drive to reduce vehicle weight and eo improve fuel consumption.

These new, thinner, steels, while as strong as traditional motor vehicle steels, are more prone to twisting and denting. Adhesive bonding has the effect of stiffening the whole structure.

The laboratory is still sorting out a problem with the long-term durability of the new generation adhesives. If used with untreated mild steel, the bonding can deteriorate in humid conditions after ebont e year. The BSC researchers have established that if the steel is chemically pre-treated with chrometes before the edhesive is applied, this problem is overcome. But they are still investigating the reasons why, in order possibly to develop cheeper chemical pre-treatment methods.

The use of adhesives in vehicle construction is not altogether new. The most famous example is the Second World War Mosquito aircraft which was glued together with pbenol-based adhesives. But those glues required high temperature and high pressure curing and were unsuitable for high volume, low cost general engineering applications. They have heen little used outside the aircraft industry.

The epoxy-based adhesive systems developed in the late 1950s were an important advance, since they bonded et room temperature with just contact pressure. But their use again remained limited because surfaces have to be thoroughly clean before application and being essentially brittle, glassy substances, they have poor peel and impact properties.

The toughened adhesives developed in the late 1970s, on the other hand, have provided the breakthrough. They are able to cope with a certain amount of contamination, notably oil, without losing their effectiveness. Furthermore, their ability to withstand impact stress can be greatly enhanced by edding rubber particles to the polymer matrix.

The rubber dissipates the destructive energy of a developing fracture — in the same way as a developing crack in metal can be stopped by drilling out its tip so that the destructive energy, instead of being concentrated at one point, is dissipated around the periphery of the drill hole.

Furnaces

Insulation materials

A SCOTTISH company believes that it has made a breakthrough in the development of carbon fibres insulation for high temperature furnaces. Calcarb, based in Bellshill, has invested £2m in the material's development and in setting np full scale manufacture.

Calcarb is part of the U.S. Consarc Corporation, a specialist maker of vacuum furnaces. Consarc has a need for carbon fibre rigid insulation and found that its own requirements amounted to £1.2m. Its material is stronger and can be mere easily made into complete single piece shapes, such as cylinders up to 8m in diameter, than competing forms of furnace insulation. Shapes are produced by vacuum forming.

The UK subsidiary has the capacity to supply up to 20 per cent of the £100m market for high grade furnace insulation materials. A growing outlet for carbon fibre insulation is in highly advanced crystal growing furnaces for the semiconductor industry and in the treatment of components in aerospace.

Calcarb's material is made from a slurry of 1mm long rayon fibres, phenolic resin and water. The company says that its strength is greater than conventional expanded carbon fibre.

Computers

Networking

The Performing Rights Society, an organisation which administers the rights of public performance, has installed a Planet communicatinns network to help it in its task.

The organisation has 70 terminals which are linked by Racal-Milgo's Planet network. These access information from an ICL computer which stores details of 500,000 active works repertoire and licence fees from 180,000 premises such as discos, restaurants and clubs.

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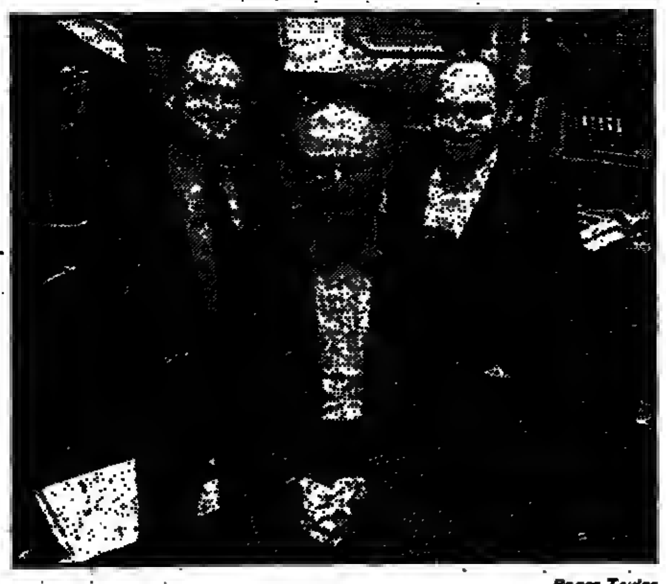
THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

A designer's search for a strategy

Alan Brew on Wolff Olins' aspirations



Roger Taylor

David Rivett, Wally Olins and Brian Boylan: expansion-minded

WOLFF OLINS was one of the brightest British design consultancies of the 1970s. It made its name with intelligent and original corporate identity work for some of the biggest names in industry.

Renault, the French vehicle manufacturer, Bovis, the British construction group and BOC, the industrial gases group, were among those which paid handsomely for a corporate facelift; Wolff Olins prospered in what was, as Wally Olins, the chairman, puts it, a comfortable period of "relatively indulgent wandering." But then things changed with a vengeance.

The onset of Europe's recession in 1978 and the second oil crisis a year later effectively removed the firm's crucial client base in the automotive industry. This principally centred on Renault and Valeo, the French components company. The jolt also forced to the surface fundamental disagreements between the two founders, Wally Olins and Michael Wolff, about how the firm should be run.

In the absence of a clear strategy the business drifted while its competitors restructured and reorganised to meet changing needs. Younger design groups, hungry for success, stole the limelight.

Yet the issue took until 1982 to come to a head, with the departure of Michael Wolff to work on his own. "It had to happen," says Brian Boylan, then a senior designer, who has recently been appointed joint managing director. "There was no clear policy and with two powerful personalities who could not agree there was no clear leadership. No one was sure what the company was about."

Wolff's departure concentrated minds wonderfully, but the way forward was no clearer. As Boylan asked Olins at the time: "What does an identity business do about its own identity when no one understands it?"

Boyland eventually became part of the answer. As part of a thorough reorganisation last November he moved into his present position together with David Rivett, a professional manager who has been recruited specifically to manage a new strategy designed to put Wolff Olins back where it feels it belongs—among the glamour names of the design business such as Aidcom, Pentagram, Fitch and Co, Conran Associates and Michael Peters and Partners.

It was this peer group pressure which provided a forceful impetus for change. Olins says he found it "extremely galling" to see what he considered to be less able groups capturing attention, particularly during the recent parade to the Unlisted Securities Market.

"One began to feel enormous frustration. We are much the cleverest and we have more original solutions," he says, without a trace of embarrassment, "but we were appearing not to be as influential."

The differences between Olins and Wolff arose partly from their very different approaches to the business. Olins, an Oxford history graduate, had developed an intellectual awareness of corporate identity, articulating its theory and practice in books, papers, speeches and debates. Wolff, with his design background remained the brilliant if somewhat anarchic creative force behind the predominantly craft-based business.

"Craft skill overwhelmed other activities," says Olins. "We were self-indulgent, we had more people than we needed and the business was not being managed."

Michael Wolff, who now sees his future working within a network of partnerships, acknowledges that he and Olins had different "visions" of the future, a situation which was probably exacerbated by fundamentally different approaches to their work. But "the boot," as he puts it, came as a complete surprise.

After more than two years the reasons for what happened are clear to him—"I became incompatible with what they wanted to do"—but he says he still finds it hard to accept.

Management consultants were called in after Wolff's departure. They recommended diversification, decentralisation and the introduction of a business manager.

The 34-year-old Rivett was recommended to Olins by Peter Gorb, who teaches design at the London Business School where Rivett was taking a management course after running his own electronics distribution business. The proposal of a joint managing directorship, splitting the creative side from management, came from Boylan, who intends to devote 80 per cent of his time to client business and the rest to administration with Rivett.

Rivett, who cuts a relatively sober and conventional figure in the design world, sees his role in equally practical terms. The initial appeal of the job for him was his perception that Wolff Olins had so far failed to grasp its opportunities.

"I am here to ensure the survival of the firm beyond its founders by putting the mechanisms into place for growth and to manage that growth."

Corporate identity will remain the firm's mainstream activity, but a series of independently managed and financed units, or "satellites," will develop a range of other related activities which were hitherto handled in an ad hoc and unco-ordinated way.

The first, Wolff Olins Interiors, opened for business on November 1 last year. It will specialise in corporate environments — the style and appearance of business interiors. This will be followed this year by a communications division which will handle public relations work.

Four other satellites — corporate advertising, retail design, product design and personnel training — have been identified as logically compatible areas of growth to be set up when the time is right and the opportunity presents itself.

Rather than risky and excessive diversification, Olins sees them as natural extensions of corporate identity work which will be tightly controlled and developed.

A flotation on the USM is planned for next year to provide acquisition funds. Olins is looking for a small retail design consultancy to purchase to form the basis of the retail design satellite. Serious expansion into the U.S. is also being considered, but first the UK market will be consolidated, especially in three main areas—the financial sector (work is well under way for the Midland Bank), the public sector (Royal Ordnance re-named from the Royal Ordnance Factory, ahead of privatisation), and the high technology sector (Case, the UK electronic communications company was recently signed). Last year profits of £300,000 were earned on a turnover of £1.8m and the hopes are for £500,000 on £2.7m this year.

To meet the planned growth Olins is enlarging the staff of about 70. Among recent arrivals are six business graduates and three interior designers. Olins himself will continue as chairman and contribute ideas, but as a man who moves easily in the higher echelons of big businesses in the search for new clients, his main contribution will be to sustain client relationships, develop new business and "raise the place of design in business."

Management abstracts

Corporate espionage. P. Maher in Business Marketing (U.S.), Oct 84 (8 pages)

Discusses both the ethics and practice of collecting information about competitive activities, strategies and products; mentions several case histories of unsuccessful ventures in acquiring industrial secrets, how to do it (both ethically and dubiously), and how to protect against it.

Trade secret security. R. A. Spanner in Business Marketing (U.S.), Oct 84 (9 pages)

Considers the degree of security required to avoid misappropriation of trade secrets; explores steps in developing a security programme, starting with an "information audit." Examines the need for "consent" within the company, and for avoiding pitfalls arising from marketing activities and employee access. Quotes many cases of secret misappropriation and how the courts dealt with them; includes a checklist of security measures. (Some of the legal points may not travel well.)

Design: a powerful strategic tool. P. Kotler & G. A. Roth in The Journal of Business Strategy (U.S.), Autumn 84 (5½ pages).

Argues that although good design can be a major factor in gaining a competitive advantage, only a few companies regard it as a strategic tool. Gives examples of companies which have achieved market penetration by outstanding design, but suggests that most companies neglect or mismanage capabilities becaus of design illiteracy, cost constraints, tradition-bound

Minding the environment. bit (Fed. Rep. of Germany). Nov 84 (5 pages, in German, English version available)

Reports on the opening, in early 1984, of the new headquarters building of Colonia Insurance on the outskirts of Cologne: to build out of town, rather than in the city centre where the (no less than) 13 previous offices were located, was a conscious decision, as was the limitation of height to four storeys and extensive landscaping around the site, creating a park open to the public. Inside flexibility and user-guidelines are said to have been the guidelines.

These abstracts are condensed from the abstracting journals published by Anbar Management Publications. Licensed copies of the original articles may be obtained at £3 each (including VAT and p+p; cash with order) from Anbar, PO Box 23, Wembley HA9 8DJ.

Consumer products

How technology sharpens the competitive edge

BY PETER KRAUSHAR

TECHNOLOGY is obviously important to product development. One of the most promising routes to commercial success is to find an opportunity strongly based on technical innovation, especially if it cannot be copied quickly by the competition.

It is equally self-evident that technology can play a crucial role in achieving such a high level of overall productivity that competitors find it difficult or just not worthwhile to try to emulate the product.

In capital goods and durables all this goes without saying. But consumer goods manufacturers, too, should regard technology as vital to success. With a few key retailers becoming more and more powerful, manufacturers of branded products can only succeed with something distinctive, and which can create its own market "niche." Technology can be used not only to provide a vital degree of lead time over other suppliers of branded products, but also to stop large retailers developing similar private label products as soon as they see enough potential.

There is a mass of such examples: Rowntree's Chunky Aero and Cadbury's Wispa; the work behind L'Oreal's Free Hold Styling Mousse, launched after L'Oreal spent five years marrying two polymer molecules which no one had thought possible; the pioneering work that Procter & Gamble put into biscuits to develop Duncan Hines Soft Cookies, thus revolutionising the U.S. biscuit market; Searle's R & D work behind aspartame, which must be one of the most successful food products of the decade (see this page, February 14); the development of Swatch watches by Asuag-SSIH (see Leader page, February 21; Boots' work which resulted in Ibuprofen; Duracell's development of alkaline long-life batteries; and so on.

The global nature of this technological competition is exemplified by PET, an American innovation in plastic bottling which has revolutionised beer and soft drinks packaging around the world; Tetra Pak from Scandinavia, with its enormous impact on fruit juices and on milk (except, as yet, in the UK); pot snacks, originally from Japan, which has potential for more products than those already launched; the double pack from Japan, which has been used in Britain for KP Choc Dips; dry alcohol (in powder form), also from Japan, which is still waiting for suitable applications; and so on.

As for the use of technology to improve production efficiency, how many companies could compete with the Japanese Lotte and the U.S. Wrigleys in chewing gum production, or with Mars and Pedigree Petfoods in their respective markets?

Against this background, it was both surprising and saddening when a recent survey of attitudes to new product development in British consumer goods companies produced the results shown in the tables. Only 12 per cent of the samples found ideas from R & D extremely useful, and study of technological and of packaging developments was quoted as extremely useful by only 10 per cent. Technical development was quoted as vital for a major new product by only 42 per cent and production efficiency by only 26 per cent.

The respondents tended to be either managing or marketing directors—the executives who usually make the most important development decisions in such companies. Until there is a change in their outlook, their companies will lose out to competitors with more enlightened attitudes. If the success rate of new products is to be improved, general management, marketing and R & D really must work as one unit and not as three different functions.

The author is chairman of the London-based KAE consultancy.

"WHAT HAVE YOU FOUND EXTREMELY USEFUL IN FINDING NEW PRODUCT OPPORTUNITIES?"

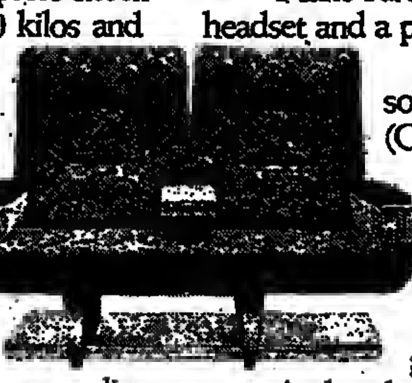
	%
Range extensions of current products	38
Ideas from abroad	29
Lessons from past projects	23
Brand extension work	20
Mapping exercises to find market gaps	18
Group discussions to find consumer needs	17
Ideas from R and D	12
Study of technological developments	10
Study of packaging developments	10

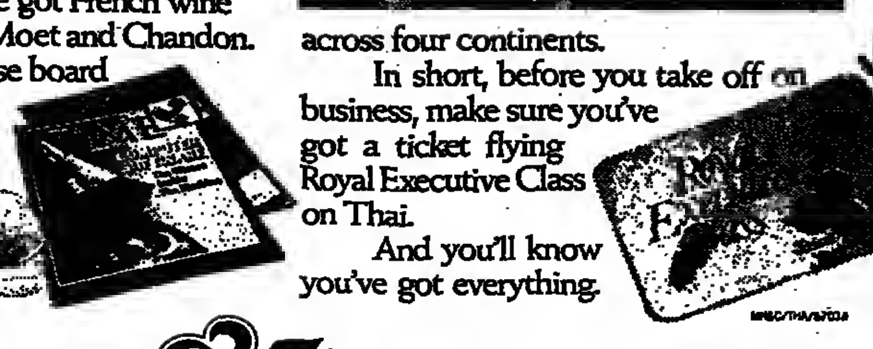
Source: KAE

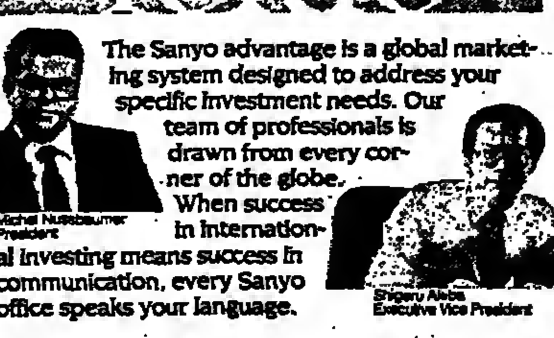
"HOW VITAL HAVE YOU FOUND VARIOUS FACTORS IN A MAJOR NEW PRODUCT?"

	%
Top management commitment	72
Development into consumer proposition	66
Initial idea	59
Sales force commitment	59
Distribution	57
Financial evaluation	48
Consumer research	48
Liaison throughout company	46
Pricing	46
Detailed implementation	44
Technical development	42
Consumer advertising	36
One senior executive leading project	32
Project champions within company	26
Monitoring after launch	26
Production efficiency	26

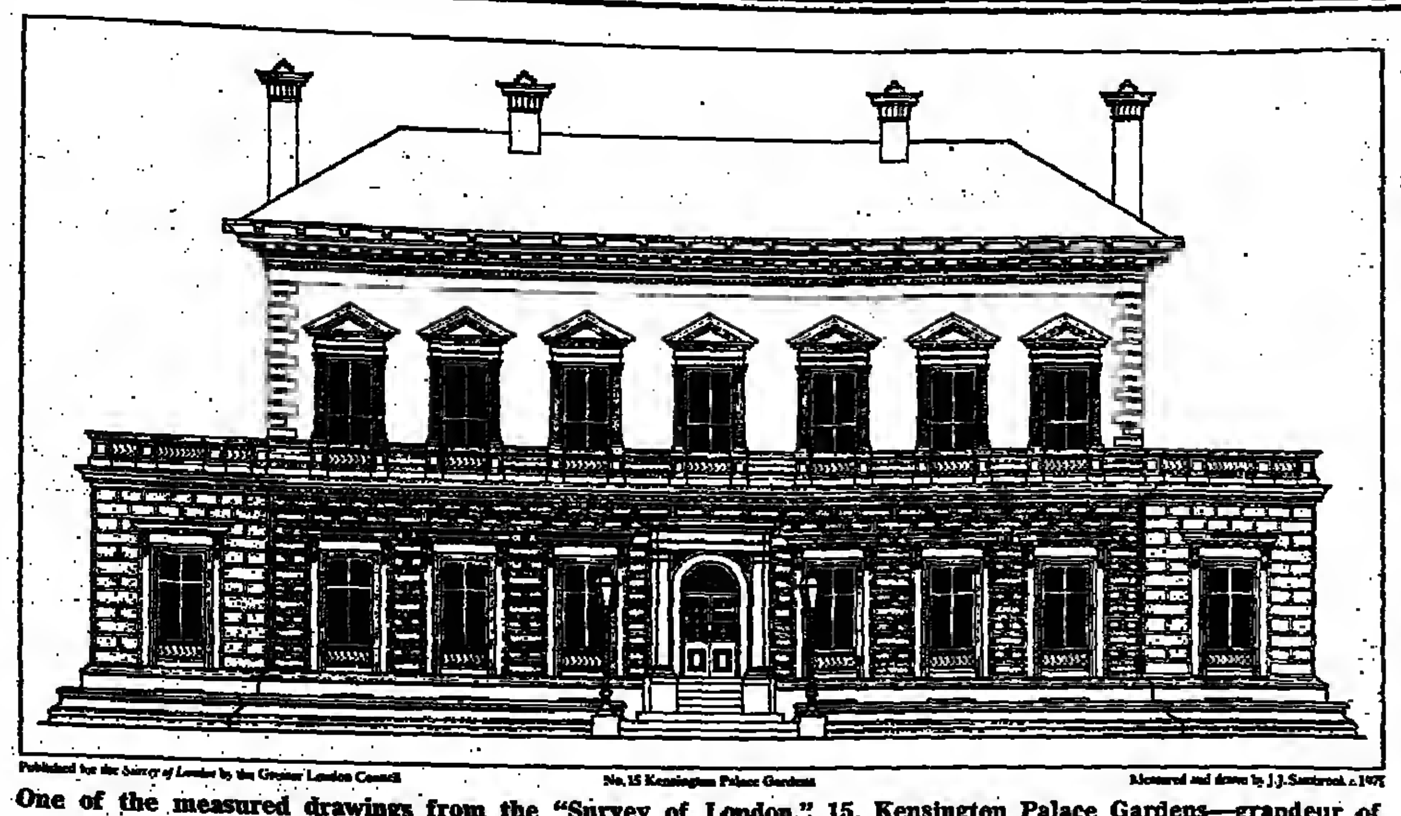
Source: KAE







THE ARTS



One of the measured drawings from the "Survey of London," 15, Kensington Palace Gardens—grandeur of the 1850s

Architecture

Colin Amery

Surveying the fabric of London

In his foreword to the catalogue of the exhibition *London Surveyed 1894-1984* the chairman of the Greater London Council, Mr Illtyd Harrington, writes that, "cities are sensitive, complex organisms which can be seriously harmed (does anyone still doubt this?) by ignorant interference and wholesale renewal. To plan properly for the future we must have a deep understanding of *how things came to be as they are and the precise nature of the existing fabric.*" Of course he is right, but it is amazing how often this has to be said and how loudly it has to be shouted into the ears of certain vested interests.

The GLC chairman is introducing an exhibition of the work of the Survey of London Section of the Council—a group of dedicated architectural and urban historians and several skilled draughtsmen — always known affectionately as "the Survey." Appropriately enough the exhibition is to be seen in *the Geffrye Museum, one of the old London County Council's sensitive re-uses of a historic building.*

The present Government's purely political approach to the sensitive and complex city of London has meant that the future of the bodies which deal with historic buildings is not totally certain. While the Bill to deal with London's future is going through its committee stage it looks as though the GLC's historic buildings division—the group that has unrivalled practical knowledge of London's fabric—will move to the recently established Historic Buildings and Monuments Commission under Lord Montagu of Beaulieu.

The Survey of London, however, will move under the aegis of the Royal Commission on Historic Monuments — the national survey that is most anxious to remain separate from Lord Montagu's less academic group. This means the scholarly and painstaking work of the Survey which has so often underpinned the decisions of *the Historic Buildings Division* will be administered independently—away from the group of people actively preserving London.

Inevitably the abolition of the GLC has created absurd muddles, as has the reorganisation of the heritage bodies under that hastiest of ministers, Mr Michael Heseltine. London was very well served by the GLC when it came to historic buildings. *The traditions of care and learning that seemed to be second nature to the old LCC* have continued, particularly under the guidance of Mr Ashley Barker, the present Surveyor of Historic Buildings. He and his department and all those who work on the Survey of London are the unsung heroes of our capital.

This exhibition is a tribute to one aspect of their work, a little known one that should be more widely appreciated. It is a small show of drawings and *some* rescued fragments of demolished structures but it has a quality of almost obsessive love of London that is infectious. Many of the drawings have been published in the 41 volumes that have appeared to date but some of them are drawings of *record* that are used by the Survey and will not be published.

Two clear things emerge from this collection of the Survey's work. First of all the high quality of the draughtsmanship sustained over the entire 90 year period. Secondly *there is a curious sense of loss* — several of the drawings are of whole *areas of the capital* that have disappeared. The vanished glories of Grosvenor Square, many of them from the 1720s, expose a level of vandalism that is still hard to credit. Many of the most extraordinary losses appear to have been in the East End of London where the old LCC seems to have had an extraordinary bout of conscience over the neglect of the environmental quality *of the area.*

I felt it was necessary to read between the lines at this exhibition. Underlying it all is a strong sense of scholarship at the service, not of the few cognoscenti, but as a vital tool in the maintenance of the entire social and aesthetic substance *of the capital.* Ordinary Londoners appreciate this gather*ing of knowledge, they want* their city to be looked after and respected and they are not bothered whether the owners of houses were armigerous or not.

The kind of democratic scholarship here seen to be available is a rare thing. It is the right way ahead for the discipline of architectural history and criticism. How easy it is for the aesthetic approach to overrule the actual reason for the building of the capital. Economics, personalities, politics as well as the art of architecture are all vital elements in the growth of any city. To *record* it in the pragmatic way of the later volumes of the *Survey of London* is a vital contribution to the history of this country. It is also vital that this work be allowed to continue along the same path—a difficult but crucial problem for the new general editor, Miss Hermione Hobhouse, herself a distinguished historian of London.

No other city has the kind of record of its growth that is available in the London Survey. Like an iceberg nine-tenths of its work is probably invisible, but it supports the whole delicate structure that defends and often saves the fabric of the city. This exhibition is far too modest— a monster exhibition of the work of the Historic Buildings Division with many of the rescued artefacts would probably be one of the most popular shows in London. Next time the GLC should try the Hayward Gallery.

There are some good reproductions of measured drawings from the Survey on sale at the exhibition. *One is reproduced* here and at a mere £1.20 they are an investment.

The Geffrye Museum is on the Kingsland Road, five minutes from the City by bus; the exhibition continues until April 30 and should be seen by anyone interested in the past and future of the capital.

The Caine Mutiny Court-Martial/Queen's

Michael Coveney

Charlton Heston makes his London stage debut as the allegedly psychotic Lt-Cmdr Queeg whose authority on board a fictional wartime U.S. Navy ship, the Caine, was overturned by Lt Maryk after surviving a typhoon outside the Bay of Pigs. The role, of course, is associated with Humphrey Bogart who gave what is widely regarded as his last great performance in the 1954 film.

Herman Wouk's play, adapted from his own novel, is in fact an unremarkable courtroom drama. Its main achievement is to transform the inquisition of the court-martialled Maryk (John Corey) into a ruthless exposition of Queeg's curious personality. The star prosecution witness, in effect, finds himself on the receiving end of the brilliant counter-attack of Maryk's defending counsel, a Jewish flying officer, Greenwald, whom Ben Cross invests with the repellant vigour of a nice guy doing a rotten job.

The scene is set for Mr Heston—who also directs the show—with a bevy of officers led by Paul Maxwell's adjudicating Captain trooping on to take up position under the stars and stripes. The question to be answered is whether or not Queeg is insane. As Mr Heston ambles hugely into view and sits carefully on the green chair, you wonder if Queeg's insanity could possibly surpass his inanity. "That's a tough one, sir!" smiles the gentle giant who bears more resemblance to a lobotomised version of the Incredible Hulk than to the paranoid tyrant who has alienated an entire crew.

A trembling signalman, a junior lieutenant, a time-checking doctor who humorously asserts that no adult except a happy imbecile is "without problems"—on they come to the little dais and green chair like so many Mastermind contestants. The doctor then tells us that an air of normality is typical of paranoiacs. But wait: Queeg fondles ballbearings to stop his hand trembling.

In the interval, I fondled a cup of coffee to stop my brain shredding. Then a most remarkable and indeed alarming thing happened. Mr Heston, who had thus far given no sign of a crack in Queeg's bland pleasantness, suddenly started to act. He picked out those ballbearings from his waistcoat pocket with his right hand and transferred them—without so much as fluffing a line—to his left hand. By this time, Queeg was embroiled in accusations of "cutting a toe line" and "dropping a dye-marker" which sound as nothing compared to juggling ball-bearings and answering questions at the same time.

Saul Radomsky's court-room resembles an ocean-going art deco cocktail cabinet and is neatly transformed for the drunken epilogue in which jaw-jutting court members become slovenly revellers at the wake for Queeg's reputation. Mr Cross wraps up proceedings with a fine burst of Jewish American patriotic fervour.

Count Ory/Coliseum

Richard Fairman

Toytown castles and joke horses are the order of the day. Mozart, Janácek and Handel have done well with English National Opera recently, but on this showing Rossini has a long way to go. The production of *Count Ory*, a pantomime-like affair, dates back to the era of Sadler's Wells (1963). But the problem is not only that its sets are old-fashioned. Somebody has decided that present-day audiences can only respond to Rossini's comedies on the most basic level and the climate is one of unrelenting farce.

John Brecknock has done faithful service in Rossini's tenor roles but Count Ory now taxes him sorely. The intonation was poor; phrasing was clumsy. Rather than have him strain to such an impossibly high range it would be better to change the vocal line to suit his resources. Tenors in Rossini's day would have done so. His appeal in the role—typicality of the production as a whole — rests on a lifeline of broad humour.

Ironically Isobel Buchanan's Adèle, a surer stylist, did make a few canny adjustments to the score. Sensing where the true value of the work lies, she treats the vocal part with due respect. Her legato singing is expressive and she has a fine trill and clean coloratura, basic skills of bel canto. She also adds cadenzas and decorates reprises. But the voice itself has become a more problematic feature, unduly hard at the top.

The rest of the cast failed to assert a well-knit company spirit. Anne-Marie Owens was a warm, likeable Ragonde; Roderick Kennedy made a dull Tutor. Jane Edward's Isolier displayed some vocal brilliance in her solos. The performance swept along on a tide of raucous good humour, directed from the pit by David Parry. Brass and cymbals led the onslaught. Tempi were fast; ensemble was mostly poor.

Count Ory really deserves better. The delight of operas like this lies in the wit of the text and music. If a piece as fine as the trio in the second act is delivered with precision and spontaneity, it will be quite delectable enough and then we would have no need for the heavy-handed frollicking that is forced upon the whole work here. Away with funny hats and gaudy knickers. Show us that these are comedies of style and Rossini can only gain.

It seems unlikely that Wagner would have approved. He admired Rossini's scores and defended them as an expression of "the whole of elegant society." Fortunately his own operas fare better at the moment. By the last night of *Tristan and Isolde* on Friday the old guard (Goodall and Remedios) had left the cast. But, whatever loss that entailed, this performance was still true to the spirit of the work in hand.

Lionel Friend took over as conductor for one performance (an unenviable task). Gone was the old maestro's sprawling epic, its vacillations and now hapbazard glories; and in its place came a more conventional reading in the making. The first act gained in tension. One sensed that the orchestra, for all its understandable lack of polish, was happier under a younger, more decisive baton. The increase in dramatic temperature helped Johanna Meier's positive Isolde.

The role of Tristan was taken by Kennethe Woolam. Strong and tireless, he has always been a heroic singer by nature. Now the hard work that he has done on this role has brought sensitivity to his singing as well. More remains to be done: the tone can still be uningratiating and the phrasing short. (Even "O sink' hernieder" was broken up.) But his Tristan is already a satisfying, varied and moving portrayal. He is on the right track.

Three ballets/Covent Garden

Clement Crisp

The present unhappy revival of *Ballet Imperial* at Covent Garden can in no way militate against continued performance of a *magnificent work that* the Royal Ballet should honour as its own, *since* Balanchine staged it especially for the company. (*Parenthetically,* I must here pay tribute, which reasons of space excised from my initial notice, to Moira Shearer, whose interpretation in the first staging set standards of radiant command of the ballet's style and step against which I have measured all subsequent ballerinas, as I do the ballerina of the trio against Beryl Grey's soaring mastery of her role in 1950).

This *new* production is a fifth carbon copy, smudged, illegible, of the original. To restore *Ballet Imperial's* dignity as a work of art several tasks await the Royal Ballet. A first decision must be to put out fewe flags, and dispense with Mr Lebrun's encroaching set (more evocative of the Boulevard Périphérique than Petersburg). Seen against a light-filled cyclorama, the costuming — albeit vulgarly obvious—should be acceptable, *once the girls are rid of their* squaw's feathers. The matter of text and style *is* a graver problem. On Saturday night, with Ravenna Tucker, Jay Jolley and Deirdre Eyden in the leads, there was still a tentative air about the performance, with a ragged corps and uncertain principals pussy-footing after the dance.

This faint but pursuing manner could be rectified if a ballet-master were invited *from* Balanchine's company to drill some physical edge and momentum into dancing which is blurry with muffed accents, and to re-*draw* the *fudged* outlines of a text which looks at times as if *it* has *slipped* half a beat off the music. This in its turn must be more taut in rhythm and tempi. Then a great ballet will truly be revived, and not serve merely as testimony to the declining technical and artistic standards of our national company.

That the Royal Ballet is capable of fine things was clear in last week's return of Michael Corder's *L'Invitation au voyage. The nacreous world* of Yolanda Sonnabend's poetic design; the dreams of delights and half-remembered regrets that are sensitively captured in Corder's lyric dances; the exquisite account of Duparc's songs from Colette Alliot-Lugaz (an ideal interpreter), all served to show how well-judged are the elements in this delicate yet coherent work of art.

So, in a brutally different way, are the components of MacMillan's *Different Drummer.* Woyzeck's torments, his inarticulate revolt against brutality, are shockingly true in expression, and terrifying to view in Stephen Jefferies' highly charged portrayal of this Germanic Petrushka, and in Maria *Almeida's* assumption *of the* role of Marie, a reading I prefer in physical clarity and womanliness to Alessandra Ferri's original.

Uncomfortable, uncompromising *Different Drummer*, receives dedicated performance from its cast in this revival; it remains a *harrowing theatrical experi*ence, and—unlike *Ballet Imperial*—for all the right reasons.

Carmen/Tricycle, Kilburn

Martin Hoyle

The story is inexhaustible. Leaving aside Miss Jones, Peter Brook, sundry balletic incarnations and Francesco Rosi's imminent film of the opera, the Scots-based Communicado company's version is sub-titled "The Play. Spain 1936."

Rosi's views of Bizet's heroine (as opposed to Mérimée's original) is influenced by the Commune that preceded the opera's première by a few years. *He sees Carmen as a free spirit,* a feminist before her time. Ironically, *Communicado's* updating to the Spanish Civil War partrays her as a total opportunist who betrays her comrades, and whose murder by the jilted José just anticipates her execution for treachery by the communists.

Stephen Jeffreys's adaptation makes points about the politicisation of the non-political: José, a sample Basque, joins the army to avoid trouble at home and deserts just as pragmatically. The play ends with him bitterly *surveying* the bombed ruins of Guernica, victim of a *greater* betrayal than mere sexual infidelity. While not convincing entirely in its sexual and political parallels, the absorbing story of an obsession remains—enjoyable particularly for such sheerly theatrical moments as Escamillo's final corrida in a deserted arena to the sound of distant *gunfire from the advancing fascists;* or the free-*standing slatted screens flicker*ing like Venetian blinds to lend the figures behind an unreal, stroboscopic quality.

Above all, Anna Hemery and Anne Wood provide a musical commentary mainly on violins and percussion, a world away from Bizet, that intensifies the mood and, as José chases the elusive Carmen through a city alive with drums, almost takes over.

Alison Peebles's sturdy Scottish Carmen is less of a gypsy *than a sleek suburbanite on the* make, well-groomed in taffeta (it looked more 50s than 30s to me) and never removing her high heels even when gun-running on the beach. Her opposite number, unlike the opera's good girl from back home, is here Pilar, a communist fighter given to rather po-faced declarations of belief and played with a convincingly dogged earnestness by Grace Kirby.

Robert Pickavance is José, occasionally overdoing the quiet intensity. A host of small parts are taken by Edward York and Gerard Mulgrew, who directs and whose appearance as Carmen's jeering jail-bird husband needles the wretched José into violence. Mr Jeffreys's controlled writing and bright ideas in the production compensate for odd patches of bathos

Rolfe Johnson/Wigmore Hall

Richard Fairman

Recitalists who want to include Italian songs in their programmes are *often disappointed* to find the cupboard relatively *bare.* For *all* their love of the human voice the composers of Italy did not enrich the song repertoire in the way their French and German colleagues did. Last Thursday Anthony Rolfe Johnson—encouraged, no doubt, by his ever-inventive accompanist Graham Johnson—offered an ingenious alternative: groups of Italian songs by non-Italian masters.

The chef d'oeuvre of this genre is *surely Britten's Seven* Sonnets of Michelangelo. How brilliantly Britten has feigned the music of the South, be it the *arie antiche* or the verbal patter of the folk songs. Here too Italian tenor glory meets its more modest English counterpart. (This was the first cycle Britten wrote for Peter Pears.) Rolfe Johnson is very much at home *with it* all: he has an Italian's warmth and strength, *but also* the *Pears-like head* voice, sensitivity and command.

Neither he nor Graham Johnson offered a mere copy of the composer's famous recordings. The music was newly considered, less pointed in articulation than before but with a Mediterranean glow in the textures as compensation. In the French group there were some comparative rarities: Massenet's "Souvenirs de Venise," all harmony and no tune; and Fauré's "Barcarolle," a characteristically inventive song using the simple Venetian *boat-song formula to great* effect.

In the first half Lieder by Schubert and Richard Strauss were less pleasing. The many beauties of line were the same; but the voice had not yet found a sure focus and the singing wanted some variety.

Miriam Fried/Wigmore Hall

Andrew Clements

The small audience at the Wigmore Hall on Saturday *evening was difficult to explain.* Miriam Fried does not visit London all that often and, as her recital demonstrated, she is as accomplished a violinist as her distinguished pedigree suggests. If her choice of the three violin sonatas that made up her programme seemed short measure in terms of duration, with Bartok's second sonata as the centrepiece there *was no lack of musical* substance.

She began, however, with Mendelssohn's F-major sonata of 1838 suppressed by the composer and only resurrected in 1953 by Yehudi Menuhin. In many respects it is a trial run for the later E-minor concerto, with similar gestures and a pair of extrovert out movements, though in the sonata there is a tendency to resort to accompanying figures whenever the piano gets the melody. Miss Fried *sometimes* pressed *it* too hard, as if she was indeed playing the concerto; *her* tone is always assertive and clearly projective, but it can be just a shade un-yielding in lyrical passages. For the same reason the more vehement stretches in Brahms's D-minor sonata consequently had an impressive fierceness, as the adagio was diminished in statue and effects almost treated like an interlude before the *real, more urgent* business of the sonata was resumed.

In the Bartok sonata however the *considerable strengths* of Miss Fried's playing came into their own. That she was able to sustain both her own and the audience's concentration through the work was a triumph in itself but the intensity of her account, the single-minded way in which she accumulated tension, through the central section of the first movement, and *maintained* the *tempo* of the second so unflaggingly, were *almost as impressive.* Roger Vignoles was always a most attentive pianist; some of the bass pedals in the first movement of the Bartok were understated, but they really require the left-hand power of a Horovitz to bring off their real effect.

Ballet de Montreal

The Ballet de Montreal, founded by Eddy Toussaint on 1974, is bringing two programmes of modern ballet to Sadler's Wells on April 2 for two weeks.

Arts Guide

March 1–7

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Music

PARIS

Trio Suk-Ensemble Orchestral de Paris: Beethoven, Smetana, Schubert (Mon). Salle Gaveau (5632030).

Nouvel Orchestre Philharmonique conducted by Michel Corboz with Ensemble vocal de Lausanne: Bach – Saint Matthew Passion (Mon). Salle Pleyel (5610630).

Shirley Verrett recital, Christian Ivaldi, piano: Mozart, Strauss, Brahms (Mon). Theatre de l'Athenee (7426727).

Bruno Rigutto, *piano:* Haydn, Ravel, Chopin (Mon). TMP-Chatelet (2334444).

Orchestre National de France conducted by Garcia Navarro, Christa Ludwig, Mezzo, Yuri Egorov, piano: Mozart, Mahler, Beethoven (Tue). Salle Pleyel (5341516).

ITALY

Rome: Teatro Olimpico: The New Quartet. Mozart, Boccerini and Beethoven (Wed). (393304).

Rome: Oratorio del Gonfalone: (Vicolo della Scimia 1/B) Quartetto Cameristico Veneto. Handel, Bach and *Galuppi* (Thur). (655952).

Milan: Teatro alla Scala: The soprano Edita Gruberova. Wolf and Dvorak accompanied by Friederich Haider (Mon). (809126).

VIENNA

Bach's Matthauspassion with the Vienna Bach soloists, the Chorus Viennensis and the Vienna Boys Choir, conducted by Ernst Wedam. *Konzerthaus* (Tue).

Vienna Symphony Orchestra conducted by Christoph von Dohany. Stravinsky and Tchaikovsky. Musikverein (Wed and Thur).

WEST GERMANY

Frankfurt, Alte Oper: Frankfurt's Radio Symphony Orchestra under Eliahu Inbal and pianist Rudolf Buchbinder plays Mozart and Mahler (Fri).

LONDON

Orrett Rhoden, piano: Scarlatti, Bach, Schubert, Balakirev and others. Queen Elizabeth Hall (Tue). (9283191).

Medici String Quartet: Beethoven, Bush, Cowie and Tippett. Purcell Room (Tue). (9283191).

Gerard Souzay, baritone, accompanied by Robin Bowman. Beethoven, Brahms, Ravel and others. Wigmore Hall (Tue). (9352141).

London Mozart Players conducted by Jane Glover with Anthony Rolfe Johnson, tenor and Simon Callow, narrator. Mozart. Royal Festival Hall (Wed). (9283191).

NELP Chorus and Nemanó Percussion Ensemble conducted by Michael Kibblewhite. Rossini and Stravinsky. Queen Elizabeth Hall (Wed).

Imogen Cooper, piano: Schubert. Wigmore Hall (Wed).

TOKYO

London Philharmonia Orchestra, conductor: Simon Rattle. Berlioz, Debussy, *Shostakovich.* Showa Women's College, Hitomi Memorial Hall (Tue); Brahms, Haydn, *Britten,* Sibelius. (Thur). (4038011).

Yomiuri Nippon Symphony Orchestra, conductor: Karl Münchinger. Mendelssohn, Beethoven. Tokyo Kosei Nenkin Hall (Shinjuku). (Wed). (2706191).

NEW YORK

New York Philharmonic (Avery Fisher): Erich Leinsdorf conducting, Malcolm Frager piano. Copland, Bartok, Brahms (Tue). Erich Leinsdorf conducting. Julliard String Quartet, New York Choral Artists. *Handel, Schoenberg,* Debussy, Berlioz, Tchaikovsky (Thur). Lincoln Center (8742424).

Carnegie Hall: National Symphony. Rafael Fruhbeck de Burgos conducting, Mstislav Rostropovich, cello. Rossini, Prokofiev, Berlioz (Tue); Rotterdam Philharmonic. James Conlon conducting, the Orpheon Chorale; John Aler tenor. All-Liszt programme (Wed); Rotterdam Philharmonic, *James Conlon* conducting, Horacio Gutierrez piano. Janacek, Tchaikovsky (Thur). (2477459).

WASHINGTON

National Symphony (Concert Hall): Pops concert with Chet Atkins (Wed); Mstislav Rostropovich conducting, Leon Fleischer piano. Berlioz, Ravel, Shostakovich (Thur). Kennedy Center (2543776).

CHICAGO

Chicago Symphony (Orchestra Hall): Henry Mazur conducting. Mozart, Bruckner (Tue); Rafael Kubelik conducting. All Bruckner programme (Thur). (4358122).

Lloyd Webber's Requiem/New York

Edward Heath

The first world performance of Andrew Lloyd Webber's *Requiem* in St Thomas' Church, New York, last Sunday evening made a profound impact on those present. It was received with prolonged applause from a large and distinguished audience, most of whom, after all, had not known beforehand what to expect from the composer of *Jesus Christ Superstar, Evita, Cats* and *Starlight Express,* to name but a few of his successes.

The *Requiem* creates its effect as much through its simplicity as through its technical ingenuity. There are moments of sheer beauty which will linger long in the memory. It moves the listener deeply because Andrew Lloyd Webber was himself deeply moved by the events which led to its composition. The death of his father, a distinguished church musician who must have provided much of the musical background in which Lloyd Webber was brought up; the death of a young journalist acquaintance at the *hands of terrorists;* and a child facing death in Cambodia —all contributed to the feeling expressed so powerfully and yet with considerable constraint throughout the work.

It broadly follows the classical Latin text and is written for three soloists, soprano, treble and tenor, mixed voice choir and full orchestra. The latter does, however, omit completely the violin section but demands an increased force of at least eight violas, together with the addition of two saxophones, harp, piano-celeste and organ. The soloists' parts are demanding, none more so than the treble, and all three are required to cover a wide range.

The treble soloist plays a key role throughout. Gabriel Fauré wrote his Requiem Mass for a boy soloist, though today it is more often sung by a soprano. I have no doubt that we shall often hear the Lloyd Webber Requiem sung in future with two soprano soloists, but that will never be the same as the composer intended. It will be no substitute for the purity and innocence of the boy's solo voice in the opening and closing *Requiem aeternam dona eis, Domine* and the blend of colours with the soprano and treble together in the *Pie Jesu.*

The New York performance was admirable. The Winchester Cathedral Choir, which had already taken part in recording the work, was flown out to join the St Thomas' Choir. Although *they had* cultivated different styles, as we recognised earlier in the evening from the Winchester Choir singing Purcell's *Jehovah, Quam Multi Sunt Hostes Mei!* and St Thomas' Choir singing Bach's *Zinget Dem Herrn,* they combined well together in the *Requiem,* producing full-bodied time and accurate singing in the robust and technically tricky aspects of the *Deis Irae* and *Confutatis maledictus* (marked *Andante Militare*).

Placido Domingo, singing superbly in the haunting phrasing of *Ingemisco* and being extended to the utmost in *Hosana, was the tenor soloist.* Sarah Brightman's soprano voice rose over choir and orchestra together at the top of her range with a clarity which was remarkable. She has an exciting capacity to perform wide leaps with complete accuracy, while at the same time *maintaining the quality of* her tone. The treble soloist, Paul Miles-Kingston, from Winchester Cathedral, sang with absolute confidence and complete control in a situation which would have tested any *musician's nerve. His* voice blended with Sarah Brightman's and their phrasing was excellent, especially in the *Pie Jesu,* one of the loveliest pieces in the *Requiem.* But it was in opening and closing with *Requiem Aeternam* that he gave its character to the whole work.

The orchestra of St Luke's, New York, without its violin section but increased to contain 12 violas and the additional instruments I have mentioned, *established* a sound balance with choir and soloists. In this it was greatly helped by Lloyd Webber's orchestration, which almost always allows the other participants to come through clearly without battling against overwhelming instrumental forces.

This first performance was conducted by Lorin Maazel, who has already recorded the work with the same soloists, Winchester Cathedral Choir and the English Chamber Orchestra. No composer could have asked for more care to be paid to his wishes, be it tempi or any other markings, nor for any conductor to enter more fully into the spirit of *his work. This was shown to* immense effect in the *Hosanna.* It is dominated by a wide leaping syncopated theme for the tenor soloist, repeated and then joined by the choir; the orchestra adds its own pounding rhythm.

Then, with a change of key, the tenor once more dominates the *scene* and, *with choir* and orchestra, builds up to a dramatic climax. This really is song and dance in one of the most joyful musical hosannas known to me. Was it, perhaps, not quite so dynamic, did it not explode in quite such a frenzy as I had heard in London in the recording sessions? Maybe it was the cathedral-like atmosphere which just took the edge off this very contemporary contribution to the *Requiem.*

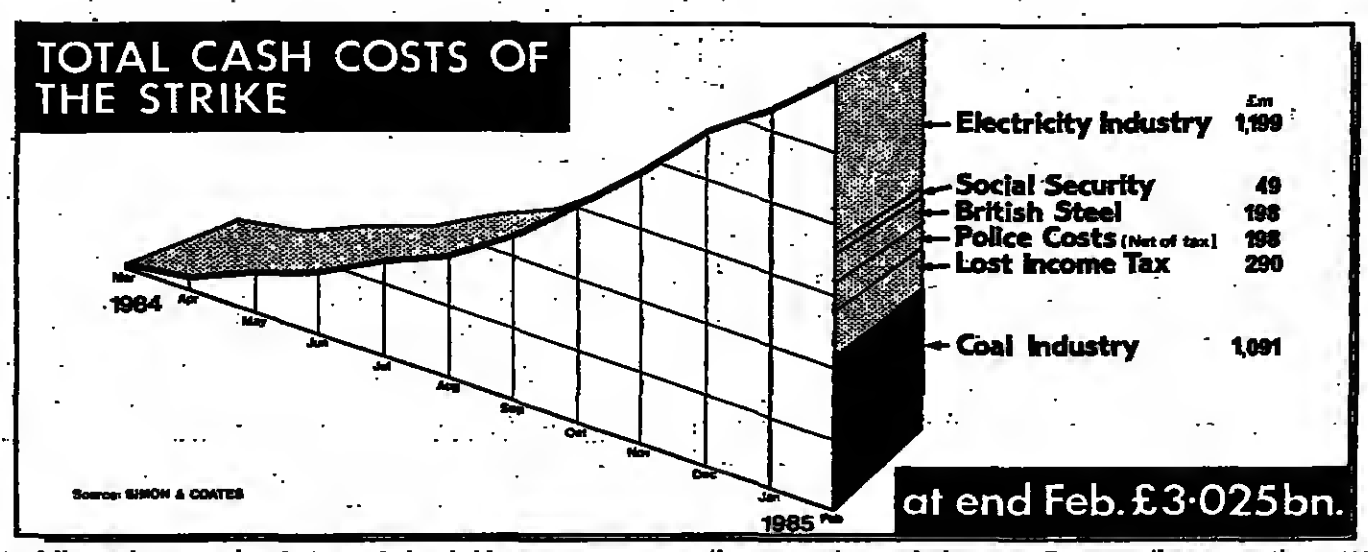
And so we moved on to *Pie Jesu* and finally to *Lux Aeterna* and *Libera Me.* The *Requiem* draws quietly to its close. One more dramatic crash of the percussion and full organ and then just the unaccompanied treble voice *singing* that memorable phrase, *Requiem Aeternam dona eis, Domine, et Lux — perpetua —* perpetua —perpetua—perpetua—as it slowly dies away.

THE END OF THE MINERS' STRIKE

ECONOMIC IMPACT

The cost might have been higher

By Max Wilkinson, Economics Correspondent



JUST BEFORE Christmas, Miniaters were congratulating each other with surprise and delight about the very small price which the country seemed to have pald for the miners' strike.

Now, with interest rates et 14 per cent and confidence in sterling badly jolted, their assessment is more subdued: although the cost might have been very much worse, it is conceded that the financial markets bave exacted e heavier price than seemed likely last autumn.

Anxiety about the oil price and the rising dollar may heve triggered the sterling crisia, earlier this year, but it seems fairly clear that the effects of the miners' strike played an important part.

The strike contributed to e general faltering of confidence in two main ways: first it added about £2¼bn to the Public Sector Borrowing Requirement for the current financial year, and was therefore the main cause of the overshoot which Mr Lawson will be announcing on March 19 In his Budget. Some estimates put the cost as high as £3bn.

Second, the extra imports of oil, needed in power stations instead of coal, have worsened the current eccount of the balance of payments by perhaps £2¼bn to £3bn in the 1984-85 financial year.

In simple terms, this means that the Government has financed the cost of the strike through extra borrowing and through a worsened trade balance. As a result aterling has been pushed lower than it would otherwise have gone.

The Treasury'a rule of thumh suggests that extra borrowing of £2¼bn may have raised interest rates by around 1 percentage point compared with the level they would otherwise have reached. This is not enough by itself to explain the rise in base rates from 9½ per cent at the turn of the year to the present 14 per cent.

But given the volatile state of the financial markets, it may be that this extra pressure on the Government'a finances helped to tip the balance against sterling, and was an Important contributor to the tightening of financial policy which followed.

Who will bear this cost? In the first instance, all borrowers including anyone with a mortgage, will suffer higher interest payments than would otherwise bave been the case, but people wanting to save money obviously benefit.

On a slightly longer timescale, the conjunction of higher interest rates with lower sterling is likely to depress economic activity slightly, especially if the upward pressure on prices resulting from the lower exchange rate causes the Government to run a tighter domestic fiscal and monetary policy than it would otherwise have done.

The main cost of the miners' strike may therefore turn out to fall on the unemployed, to the extent that increased financial pressures have prevented the Government from following the slightly more expansionary policy which it favoured before Christmas. A more immediate cost will appear in the Budget on March 19, when tax cuts are likely to be considerably less generous than had been planned.

There will also be e continuing cost to taxpayers of around £250m a year in extra debt servicing. This is the equivalent of 1 per centage point on corporation tax or a rise of 1 per cent in all income tax allowancea and thresholds.

The cost of the atrike reflected mainly the need to substitute expansive oil for coal aa e fuel in power stations. This was offset partly hy the reduced wage bill for miners and reduced investment in the coal industry. Extra policing and social security costs, however, added to the nation's bill.

A year ago, before the strike atarted, coal was being hurned in UK power stations at the rate of just over 10m tonnes e month, with the oil burn at only the equivalent of 800,000 tonnea of coal per month. In October the coal burn was 8.5m tonnes, with oil consumption pushed up to just over 4m tonnes of coal equivalent.

Since the etrike began total coal stocks have fallen from 23m tonnes (in March 1984), to a current estimate of 12¾m tonnes. So, at £42 a tonne, the consumption of stocks during the strike represents about £420m.

This is part of the "cushion" that the taxpayer has already financed through the pre-strike subsidies which enabled the coal industry to produce more than it could sell. At the start of the strike, the "aaving" from consumption of coal stocks more than offset the extra cost of oil.

But as oil consumption rose and the price of oil also increased in sterling terms, so did the cost to the electricity industry.

Mr Gavyn Davies, chief economist at the broker Simon and Coates, estimatea thet the cash cost to the electricity industry rose from about £126m per month in August to neerly £275m per month by January, although it haa fallen back since then.

Up to the end of February be puts the total cash cost to the electricity industry after allowing for the run-down in stocks at ehout £1.2bn. Extra Coal Board losses are put et £1.1bn with the cost of lost income tax, policing costs, extra losses et British Steel and extra social aecurity payment costs put at a further £730m, giving a total cost of £3bn.

In terms of national ontput, the coal strike is officially estimated to have reduced Gross Domestic Product hy 1 to 1¼ per cent in 1984, but this is mainly confined to miners and their communities, representing the loss of coal production and the reduction in miners' spending power.

Most economists believe that much of this loss to output will be made up this year as coal production and Investmant gets back into gear. However, at the end of It all, Britain'a national income will he permanently lower than it would have been without the strike.

Moreover, some of the British coal industry's market may bave been lost for good. As Mr Christopher Johnson, chief economist for Lloyds Bank, points out, higher oil prices in recent years had stimuleted some relative switch in demand from oil to coal.

Up to the beginning of the strike, coal was maintaining its 36 per cent share of a falling energy market while oil was loalng lts share. It msy he that companies considering a switch from oil to coal will hesitate after the strike, or consider using imported coal.

In 1983 net exports of coal were 2.2m tounes, compared with net imports of about 7m last year. Imports rose from 5.2m tonnes In 1983 to an estimated 10m last year. Any permanent loss of export markets will not only affect the coal industry hut will be a continuing weight on the balanca of payments.

However, when all these costs are added up, the Govarnment will set tham against the cost of not having fonght the miners or of giving in to them on the issue of pit closures. The arithmetic, no douht, is highly suhjective. However, the £2bn to £2.5bn cost of the strike has to he aet against the coal industry's annual losses of £1.3bn (in 1983-84), to a large extent the result of digging up coal at a cost whlcb made it impossihle to sell.

In Financial terms the strike could pay for itself within a few years if, as a result, severely loss-making pits can be closed and miners' pay grows more in line with the average for other workers.

But for the Government, tha defeat of the miners' union will have much deeper significance. It will he seen as a major step towards loosening the trade unions' repressive grip on the workings of a free market economy.

This is why Mr Nigel Lawson, the Chancellor, suggested in the *Commons before* Christmas that winnlng the strike could be worth every penny it cost.

TUC

Unions facing a credibility gap

BY PHILIP BASSETT, LABOUR CORRESPONDENT

"THIS STRIKE hasn't been about pit closures," says Dr Kim Howells, National Union of Mineworkers' researcb officer for South Wales. "This strike has been about taking on the organised British labour movement—and smashing it."

If that's right, then at least on the surface, Britain's unions *look* remarkably composed: one of the extraordinary points about this extraordinary dispute is that after 12 months of bitter strike, carrying with it constant potential for union division, the TUC General Council last week was unanimous on it.

Partly this is due to some classy and classic TUC footwork, carefully, cautiously and ceaselessly picking its way through the landmines of the strike's hislory of negotiating abrapnel towards a settlement. Even though—perhaps, in a sense, because—it didn't stick with the NUM's leadership, this has been vital for the unions generally.

Valuable for the unions though this has been, it's both recent and essentially rehabilitatory. Mostly the reason for the General Council'a unanimity is the knowledge of the hollowness of the TUC's position: the tacit acceptance of the enormous credibility gap between rhetoric and action which the strike has thrown up.

"Can you deliver?" was the basic question hammered home by Mr Willis's predecessor, Mr Len Murray, before his retirement during the course of the strike. The unions did not fail completely—vital to the striking miners, there were constant collections of food and money hy union activists otherwise robbed of a role. And some—few, hut some—unions dld take phyaical action. "My members bave heen tremendous," says Mr Jimmy Knapp, general secretary of the National Union of Railwaymen, which hlacked coal movements throughout the strike.

Mostly, though, the unions did fail: the glaring gap was best encapsulated by the TV news footage of lorry drivers thundering through Welsh miners' picket lines immediately after their own union leaders had yet again been pledging total aupport for the miners.

This gap may simply be e prohlem for union leeders, rather than union members, for whom — as the opinion polls show—the strike grew to be a boring irrelevance.

Yet the gap is real, and basic: the strike has cast serious doubts on the unions' *raison d'etre*—their representativeness. Left and Right now agree that seerching, critical self-examination is now both inevitable and necessary for the union movement.

Initially, this will take the form of hitter recrimination—led, all sides believe, by Mr *Arthnr Scargill*, the *miners'* presldent, riding the torrents of vitriol which will be spat out hy the union activists for whom the miners' strike was an apotheosis, lts ending a dream shattered.

Militant union hrancbes have already hegun to table conference resolutions attacking the TUC's "sell-out" of the miners: the crucial question for the unions is whether they can get heyond that to assess properly the strike's lessons, and learn from them.

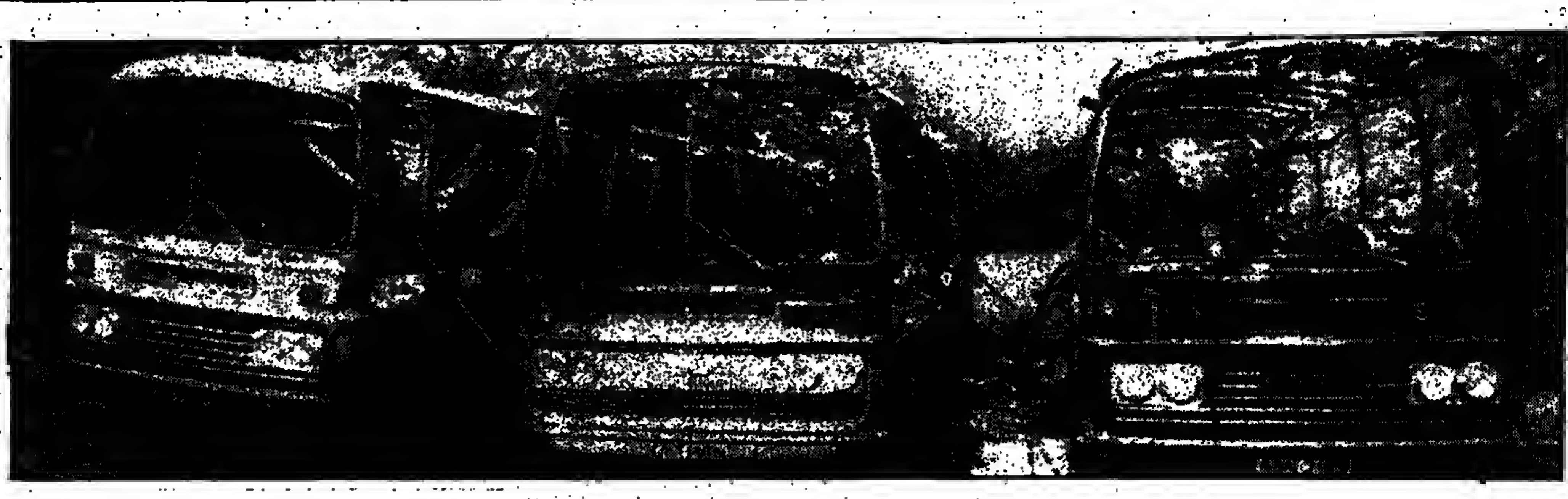
The emerging strategies are *different. With the looming* prospect of ballots on unions' political funds, for which the Left regard stability in the labour movement as essential, the response to the strike by such Hard-Left, but realistic, bodies as the TGWU executive will be *important*. If it, and other Left leaderships such as the NUR and the public employees NUPE, can steer away from sectionalised bitterness and reassess positively their relationship with their members, the outcome of the miners' strike may not be sucb a disaster as it now seems.

Right-wingers are sceptical that the Left will be so constructive. Instead, some are talking about the strike's outcome now revitalising the near-dormant TUC Strategy initiative of last year, looking actively at better union organisation, more coordinated thinking about recruitment and more representative union democracy. They are drawing comfort from the gradual process of change at local level, unaffected hy tha strike. "Unions are complying with the lew," said one general secretary "and when they have, it doesn't seem to have done them any particular harm."

What, then, are likely to be the main effects of the strike on the unions? So far, they seem to be four-fold:

- Militant trade unionism. "The failure of Scargillism must have a far-reaching effect," says Mr John Lyons, of the Engineers' and Managers' Association. "It means that the option of militant industrial action to cbange Government policies must now be closed."
- Industrial action. Some union leaders argue that now is precisely the time to pusb on with pay and other claims because the Government, though victorious, will not want more union trouble. But many others think the impact of the miners' strike has cowed unions' readiness to fight.
- Backing disputes. The refusal of unlon members to support the miners gives further credence to the growing feeling in the TUC that disputes should be assessed closely on their merits hefore support is given: the TUC, and unions generally, should only hack winners.
- Ballots. All sides now accept thet the lack of a ballot bad a telling impact on the strike. Thet is true even on the left, for all the bluster during the dispute. Mr Gavin Laird, general secretary of the engineering workers' AUEW, sees this as central: "Trade union leaders now cannot Ignore their members. They must carry them with them. And that means we have to consult them more *effectively*."

"The militants and the wreckers put everything they had Into it," says Mr Tom King, Employment Secretary, reviewing the strike. Arguing that "the workers of this country are no longer prepared to he used as conscripts," Mr King says: "I hopa the trade union movement will now finally rid itself of the militant cancer and win back its members' loyalty—hy properly representing their interests."



FACTS AND FIGURES

Trying to resolve the battle of statistics

BY DAVID GOODHART, LABOUR STAFF

LIES, damned lies and NCB/NUM statistics. The arguments in the past few weeks and months over "new faces" have been just the most publicised statistical wrangle of the dispute.

Bot it is a measure of the philosophical division between the combatants that almost every figure produced by one side—tbe relative cost of British coal, for example—is disputed by the otber.

Tba complex problem of summing np the economic cost of the dispute will be a particular battleground for years to come. Present estimetes range from a qualified £2bn from the Treasury (based on the assumption that the strike would end on December 31, 1984) to "approaching £7bn" from Mr Scargill.

But there remains a body of relatively "hard" facts arising from the strike. First, the coal industry itself:

- Coal: Total deep-mined tonnage lost since the overtime ban began in November 1983 is 78.15m. The last deep-mined total for an ordinary year was 104.7m tonnes in 1982-83.

Lost output for 1984-85—the year the NCB was looking for a cut of 4m tonnes—bas been 64,595,000. During the last ordinary week's work in October 1983 total deep-mined output was 2.2m tonnes. The week ending February 22, it was 756,000 tonnes.

The NCB says that the NUM workforce has fallen *from* 195,800 et the start of the strike to 186,064 now—a drop of nearly 5 per cent. A total of 5,751 have taken voluntary redundancy; 873 have retired for health reasons or died; 426 have taken retirement and 2,362 have gone for "other" reasons including sacking for criminal action.

At the start of the strike there were 176 pits. There are now 174 duc to the pre-planned closure of Cronton in Lancashire and Bear Park in the North-east. But the coal board estimates it has lost 60 coal faces *because of the strike*—the equivaleot of about 20 pits.

Of the 490 working faces at the start of the strike 38 have been lost—12 In Scotland; 10 in South Wales; four In Doncaster; three in both North Derbyshire and the South Midlands; two each in the North-ast and North Yorkshire and one each in Barnsley and Western area.

Twenty-two salvage faces have been lost, 10 in Scotland; five in Barnsley; four in the North-east; and one each in Doncaster, North Yorkshire and north Derbyshire. The industry does replace half its faces in an ordinary year anyway and the board concedes that some of the faces may be approachable from a different engle. However, it also estimates that nearly £100m of equipment has been lost and says that another 18 faces are causing serlous concern.

- NUM: For a day or two last Marcb when a number of Nottinghamshire pits stopped work the total number of miners on strike may have topped 150,000. But it soon fell back to about 140,000 and by November it had fallen to closer to 130,000. According to the NCB, there are now 96,000 miners, or 52 per cent, working.

It is impossible to calculate how much the NUM centrally has speot on prosecuting the dispute. The costs of sequestration elone now stend at £300,000. The striking areas have spent varying amounts.

Yorkshire—the largest and richest area—has spent about £3m, less than balf its total funds. North Derbyshire, however, has spent about £2m which is about two-thirds of its pre-strike funds.

- Backing: The total financial backing for the strikers from other British unions, foreign unions, the Labour Party and individuals is also impossible to calculate accurately. At the end of the summer it was estimated that British unions, locally and nationally, had loaned or given £5m. That has probably risen to abont £7m.
- Social Security: As in most strikes, however, the main financial prop for strikers bas come from the DHSS. The Government has so far paid out nearly £33m In supplementary benefit to strikers' families. The North-East (including Yorkshire) has taken £20.56m; Walea £4.93m; the Midlands £4.53m; Scotland £1.55m; the North-West £713,000; and the South (Kent) £665,000.

The total number of miners' families in receipt of benefit at some time in the dispute has been 48,891.

- *Police:* The total number of deployments of police officers under mutual aid provisions atands at about 1.5m. Officers from all 43 forces heve been involved with the highest number in any one week (during the Orgreave clashes) standing at 8,100. The average number deployed each week has been about 5,300.
- Courts: 9,778 arrests have been mede of whom about 90 per cent have been miners—and 7,785 people have been cbarged. Of the 5,329 cases dealt with there have been 3,990 convictions and 1,339 acquittals.

THE USE OF THE LAW

A string of court rulings for future disputes

BY RAYMOND HUGHES, LAW COURTS CORRESPONDENT

THE unprecedented involvement of the law in the miners' strike is likely to have profound consequences for future industrial disputes and for trade union democracy.

A series of High Court rulings laid down legal limits for picketing and established the personal liability of union leaders for actions taken in the union'a name.

Working miners demonstrated that it was possible for individual union members to take on and defeat a mighty union in the *courts*.

A network of—mainly provincial—solicitors, sprang up, to edvise on, plan and co-ordinate legal action on behalf of working miners, with back-up of a group of London barristers specialising in lahour law, contract and trust litigation.

For the first time judicial weight wes given to the Department of Employment'a guide-line limiting to six the number of pickets at any workplace and mass picketing was banned on the ground that it was, by its very nature, intimidatory and therefora unlawful.

Other rulings on picketing were:

- There is no legitimale distinction between "so-called pickets" at the gates and "so-called demonstrators" in the background.
- The right to picket is no more than the general right that everyone has to do what he or sha wants — if it can be done without infringing the rights of others.
- *Those organising picketing* have a legal duty to see that there is no violence or threat of violence, and that the use of abuslve or threetening language by pickets does not get out of hand.
- Harassment by pickets of people crossing picket lines, in the form of abuse, threats or other forms of intimidation, is a civil law offence.
- Area unions are legally responsible for picketing organised by their lodges or branches.
- While the organisation of secondary plcketing would not necessarily be outside a union's legal powers, the organisation of mass secondary picketing would be, because it would he bound to lead to criminal offences.

On the rights of union members the courts held:

- Union rules create e contract between tha union and lts members; if either side breaks the rules the other is entitled to allege unlawfulness and seek e remedy in the courts.
- A union member is legally entitled to insist that his union's funds are used exclusively to further the union's constitutional objects, and to sua to stop the union acting beyond its legal powers.

Union members can get "right to work" injunctions against their union if called on to take part in industrial action instigated in hreach of union rules.

On the powers and liability of union officers:

- Officers who sanction unlewful use of union funds can be made personally liable to reimburse the union.
- A misapplication of funds cannot be ratified by a majority of union members, no matter how large.
- Union trustees can be removed from office if it can be sbown that they are "not fit and proper persons" to have control of a union's funds.
- A union cannot, before the event, resolve to pay fines imposed on its members for offences committed during an industrial dispute, though it can consider Individual cases on their merits.

A notable feature of the stream of legal actiona against the national union, aree unions and national and area officers, was the fact that it was not to the Conservative Government's new labour laws that the working miners turned in search of legal weapons to use against leaders they believed were acting not only in breach of the law but also contrary to the NUM's own rules.

Thanks to the ingenuity of their legal advisers they invoked the laws of contract and trust, and alleged a variety of civil law torts which, apart from their legal efficacy, deprived their opponents of a "Tory laws" rallying call.

One aspect of the law that suffered a serions blow as a result of the miner's strike waa the sequestration process, previonsly regarded, with some justification, as a sure way of bringing a recalcitrant union to its knees.

The decision of the NUM, shrewdly anticipating an eventual sequeatration order against it, to send abroad nearly £9m of its assets, presented the sequestrotors—four partners in City chartered accountants Price Waterhouse—with new and not easily surmountable problems.

The real risk that foreign banks and courts might prove reluctant to hand over union funds to the sequestrators, led to the errival on the scene of a novel legal creation.

He was tha receiver and manager of the "income, assets, property and effects" of tha NUM—a sort of legal deus ex machina brought in ostensihly to replace the NUM's national trustees but in reality to pull the sequestrators' — and the conrt's—chestnuts out of tha fire.

Without him, it was feared, the efficacy of tha whole sequestration process was likely to be put in jeopardy, and the High Court shown to be powerless to enforce its will against a union in flagrant disregard of its orders.

The ploy seems to have been successful. Tha receiver, Mr Michael Arnold, senior insolvency partner in Arthur Young, has managed to recover £4.9m of NUM funds from Luxembourg. The sequestrators, though they were successful in tracking down all the union's assets, have so far managed to get their hands on only a few thouaand pounda in England.

THE END OF THE MINERS' STRIKE

THE POLITICAL IMPACT

Thatcher purges the traumas of the past

By Peter Riddell, Political Editor


Mrs Thatcher


Mr Kinnock


Dr Owen


Mr Steel

THE GOVERNMENT has now purged the traumas of the 1972 snd 1974 miners' strikes. For all the public denials of crowing or gloating, Mrs Thatcher and her colleagues will regard the outcome as a major victory.

The defeat of the NUM is the clearest indication so far of the weakened position of the trade unions compared with the 1960s and 1970s. After all, Mr Scargill talked a year ago about rolling back the frontiers of Thatcherism. But if the miners, the traditional vanguard of the labour movement, fail, who else can succeed?

The Government will draw two main lessons: first, that it can press ahead with the closure of uneconomic pits, almost certainly made easier by a flood of applications for voluntary redundancies; and second, the balance of industrial power has been shifted, so that further changes be introduced to remove rigidities in the labour msrket.

Yet the outcome of the dispute looked anything but certain a year ago. After the downfall of the Heath administration, a miners' strike was regarded as the major industrial challenge for the Thatcher Government. Would ministers remain firm in face of possible power black-*outs?*

The Tories examined various contingency plans even before the 1979 election and this work continued afterwards. In early 1981 the Government was not ready and so backed down over pit closures in face of a threatened strike. But by late 1983 coal stocks were high, co-ordination of police planning had been stepped up and Mr Ian MacGregor had been installed as National Coal Board chairman.

Ministers were, therefore, prepared for what many of them regarded as an inevitable battle following the election of Mr Scargill as NUM president. So if there is no evidence that ministers deliberately provoked the strike over the closure of the Cortonwood pit, as the NUM alleges, the Government was certainly ready if the NUM wanted a struggle.

At first, the Government's touch seemed uncertain. The inept public performances by Mr MacGregor during the *spring* and summer worried Ministers and Tory MPs who felt that he was alternating between toughness and making unacceptable concessions.

All this produced tensions on the *Government* side—*not* only within the National Coal Board management but also between Mr Peter Walker, the Energy Secretary, and some of Mrs Thatcher's freelance advisers *such as Mr Gordon Reece and* Mr David Hart, who were also in touch with Mr MacGregor. Many Ministers were worried by Mrs Thatcher's reference in late July to the violent methods of some striking miners as the "enemy within."

Yet any differences over the handling of the dispute which might have developed within the Cabinet were soon ended by the NUM's own tactics. The leadership's refusal, or inability, to halt violent picketing and the NUM's failure to accept the deals offered in the early autumn brought Ministers together.

The ambiguities then disappeared and the strike became a clearcut matter of resisting an undemocratic and unreasonable *challenge. Above all, by* the autumn, Ministers were sure that they could not lose. This confidence was reinforced by two highly successful public relations moves—first the emergence of Mr Walker as the main Government spokesman and, secondly, the replacement of Mr MacGregor by Mr Michael Eaton as the main voice of the National Coal Board.

The late autumn also marked a wider turning point. It was then, paradoxically, that the strike began to end for most voters. First, it was in November that the number of miners returning to work began to rise sharply. This convinced all but the diehards that the NUM had lost its battle. Secondly, the previous nightly television reports of mass, violent picketing largely ceased. It was, after all, on television, that the strike existed for most of the public, given the isolation of mining communities and the absence of power cuts.

In the past three months the strike has appeared mainly a long-drawn-out saga of return-to-work figures (like body counts in the Vietnam war) and a familiar cast going in and out of meetings.

In short, the outcome has looked inevitable. It has no longer been necessary for voters to rally behind the Government because of a violent challenge to law and order. Instead, other concerns have become more pressing, such as the rows over student grants, increased water charges and the rise in mortgage rates.

Unlike the Falklands war, the defeat of the NUM leadership may therefore have coincided with a decline in support for the Government as voters' minds turn elsewhere. The opinion polls point both to a weakening in backing for the Tories which started in the late autumn and to a significant minority blaming the Government for prolonging the strike and increasing divisions in Britain. The most recent polls have produced widely divergent results — Labour support between 32 and 40 per cent, the Alliance between 19 and 31½ per cent and the Tories between 35 and 38 per cent. But the general impression is of increasing fluidity.

For Labour, or any rate the parliamentary leadership, the strike has been a major setback. The dispute has opened up arguments about whether the parparliamentary route is the only method securing democratic change, as Mr Neil Kinnock has said, or whether industrial disruption and confrontation offer a more direct way of challenging the Government.

Mr Kinnock has been in the near impossible position for a miner's son representing a South Wales mining constituency of trying to reconcile these differences. He has been criticised both for not supporting the miners enough and for not distancing himself sufficiently from Mr Scargill. The result was not only a halt to Labour's electoral recovery (which may now have resumed) but also a sharp decline in Mr Kinnock's own rating as party leader.

The danger for Labour now is whether there will be a period of recrimination over who was to blame—which could give constituency activists a field day in attacking the leadership. The argument could become tied up with a parallel debate about whether rate-capped local authorities *should defy the law.* Yet Labour optimists, of which there are not many, believe that the end of the strike could force the advocates of confrontation to rethink their approach.

The SDP/Liberal Alliance has succeeded in not being squeezed by the strike, as it was by the Falklands war. Despite differences of emphasis over the Government's tactics between Dr David Owen and Mr David Steel, the *Alliance* has both distanced itself from the NUM leadership by identifying strongly with the working miners and criticised the Government for insensitivity in *failing* to do enough to offer alternative employment where pits have to close. According to most opinion polls the Alliance has been the main beneficiary of the decline in Tory support.

Within the Government, the strike has underlined Mrs Thatcher's dominance. The outcome will be seen by her as a confirmation of her conviction style of politics and her unwill-*ingness to compromise.* Ironically, the dispute has also produced a revival in the fortunes of the last remaining "wet" dissident in the Cabinet, Mr Walker. He has had a good strike, standing firmly alongside Mrs Thatcher (whatever reservations he may have about some of her advisers) and delighting Tory MPs with his robust attacks on Mr Scargill and the Labour Left. Instead of looking an isolated figure in the Cabinet, he is now indispensable—though he is still distrusted by many of Mrs Thatcher's close supporters.

The end of the strike may highlight differences between Mr Walker and Mr Nigel Lawson, the Chancellor, over policy towards the energy industries — about how far electricity prices should be raised to pay for the continuing costs of the dispute (several hundred million pounds of which are likely to spill over *into the 1985-86 financial year).*

Some Ministers, from Lord Whitelaw's wing of the party, may also argue that now is the time to show magnamanity, not to humiliate the miners and the trade unions, thus risking deep and lasting hostility, but instead to open up a dialogue with the TUC. However, Mrs Thatcher has always found it difficult to change gear, especially after a victory.

NUM

It's even harder times ahead

BY PHILIP BASSETT, LABOUR CORRESPONDENT

STRATEGICALLY, the point for the National Union of Mineworkers returning to work without an agreement is clear, and simple — though no less anguished for that: either go back together, with dignity, or watch the union fall apart.

Immediately, it will succeed. Miners who *have* stayed out for so long will march back together, under their banners, in concert. But what then? Appalling though the thought is for them, after a year of terrible suffering and deprivation, in an important sense the tough times now start, not stop.

For those in pits deemed by the National Coal Board to be uneconomic, the prospect now looms in reality of everything they have fought against: closure of their colliery, the loss of their jobs there, the collapse of their community.

Before that, they and other miners in pits not facing closure will have to deal, from the weakest of all possible positions, with local management determined not just to see the NCB's overall programme about streamlining the industry put into effect, but to keep control of those real and important pit-level gains the strike has allowed them to secure: rolling back outmoded working practices, splitting up the union militants, practising the right to manage.

They face *fractured,* possibly irreparable, relations with men with whom they were close. Working or striking in the dispute, the distinction will stick. Scores have to be settled, not just with the NCB.

Finally, the hardship of the strike will wear on. First pay packets may well be spent in gloomy but relieved celebration that the strike is over; after that, the debts — to building societies, banks, electricity, gas and water utilities, rates departments, hire companies, loan firms — will have to be met.

Not quite everything is negative. Throughout the strike, miners and their families — striking or not — have paid testimony to its drawing them together. The alternative welfare system constructed in adversity, principally by miners' wives and girlfriends, may no longer have to cook soup every day, but its collectivist attitude will not easily be displaced.

Left-wingers in the NUM are trying to be positive. "Its a setback," says one. "But look back to 1926—think how quickly the trade union movement regrouped after that." Led as ever by the union's president, *Mr* Arthur Scargill, the NUM left already see the process of the strike as its achievement: the means of it—preventing the immediate implementation of the NCB's pit *closure* programme, saving the five named pits from being shut down straight away—as being as important as the ends.

Maybe so; but behind the rhetoric being deployed to *try* to lift morale lies the bitterness of the strike's end. "Arthur's the only man I know who can turn and make a humiliating defeat seem like victory," says one miners' leader. "It's brave and we need to do it. But as far as I'm concerned it can't disguise that it's an out-and-out-defeat."

Hard for the strike's most active *supporters not to feel* that; harder still for them to bear the thought that the internal division in the union—"split from top to bottom" Mr Peter Walker, Energy Secretary, and Mr Neil Kinnock, Labour leader, agree—may have been primarily responsible.

"The NUM's in a mess," says one senior NCB official. Not everywhere: though the gaps between the *national* union prosecuting the strike and working areas such as Nottinghamshire are huge, in areas such as Yorkshire the strike has probably drawn NUM members closer to their union—though whether that relationship will survive the strike's end is more difficult to determine.

Aside from pit-level feelings of revenge and retribution, three forces seem likely to maintain the divisions in the union:

● NUM leadership. Much will depend *on whether the NUM* presses ahead with explusions against miners who have broken ranks under Rule 51, implemented during the strike, setting up a "Star Chamber" examination of conduct; how far the union leaders are prepared to push this is not yet clear. Secondly, the leadership's proposals for restructuring the union, reducing the representation on the NUM executive of the smaller and right-wing areas in what they see as a left-led drive to centralise and control the union, are still on the table.

● Nottinghamshire. The running sore in Mr Scargill's side, Notts' relationship to the national union is now critical. Last weekend, *in a surprise* move, Mr Scargill met the pro-working miner leaders of the area, asking them to drop their rule changes pulling away from the NUM if no action was taken *immediately under Rule 51; he* got a cool answer.

After a struggle by the area's working leaders to contain its pressure against the NUM's national 15-month overtime ban has exploded into a formal withdrawal from it. Pro-strike area leaders like Mr Henry Richardson, suspended general secretary, now seem certain to *go whatever happens. At present,* the likelihood seems just about that Notts will remain in the national union, keeping in those other areas which might follow it out.

● Working miners' committees. They gave courage and coherence to those wanting to return to work. Though there are now divisions within their ranks, their organisation and finances are strong, and their effectiveness—particularly in the courts—now has its own momentum.

Mr Scargill himself is now their main aim—the idea behind their latest legal action, halting the executive elections, is eventually his removal.

Mr Scargill is now overtly losing support in the wider union movement. "Everyone *knew that* the miners had a good case—and hoped they'd win," says one left-wing union official. "But no-one sees Scargill as a man of judgment: the NUM threw away positive gains."

Mr Scargill is resilient, and clever—but the pressures are on. Focusing on him the divisions likely to wrack the union for the foreseeable future, one leading working miner said: "I *don't* think that the NUM will ever function again as an entire organisation unless Scargill goes." The battle may be on.

THE POLICE

Fierce passions on both sides

BY DAVID BRINDLE, LABOUR STAFF

THE ROBUST policing of the miners strike has aroused enormous passions. To its *critics, it was the core of the* Government's strategy to crush the strike; to its advocates it held the line against mob rule.

As Mr Charles McLachlan, the Chief Constable of Nottinghamshire and administrator of the National police deployment operation, said during a typically ill-tempered *televised debate:* "We had an invading army in North Nottinghamshire who were absolutely determined to stop people's civil rights."

It is this premise, right or wrong, which was used to justify what was, according to the National Council for Civil Liberties, the biggest and most sustained mobilisation of police since the General Strike and the first real test of police training in riot patrol since the inner city disturbances of 1981.

The issues fall into three *categories:* the use of the police National Reporting Centre (NRC) to deploy resources; the nature of the policing; and the impact on the relationship between local *police authorities and* Chief Constables.

The NRC, set up in 1972 in the wake of the failure to deal with miners' mass picketing at Saltley, maintains de-*tails of the availability of* police resources throughout England and Wales at times of emergency. When in operation, at New Scotland Yard, it is administered by the President *of the Association* of Chief Police Officers—Mr McLachlan since last September and before him, Mr David Hall, the Humberside Chief Constable, who activated the centre, *last March,* when pickets began flooding into the working coal fields.

At any one time during the dispute, the NRC has deployed up to 8,000 officers from the police support unit of 43 forces. *Notts has* received assistance in this way from 37 other forces, South Yorkshire some 39. Without question, the operation has been the most ambitious undertaken by the centre, and has, for the first time, involved every force in England and Wales.

Critics say that the NRC undermines the autonomy of local constabularies and that, through it, the Home Secretary has effectively been running a national police force during the dispute. Although it would seem reasonable to suspect a degree of central control, both Mr Hall and Mr McLachlan have repeatedly denied that the NRC is anymore than a convenience for central administration for the traditional system of mutual aid among forces.

As is argued in a newly published book of essays *"Policing the Miners Strike"* (Lawrence and Wishart) the prolonged NRC operation has probably been a blow to the autonomy of local forces but has fallen well short of under-*mining their fiercely defended* independence.

The deployment of police support units by the NRC gives rise to the second area of debate; the nature of the policing. *While the Police* Federation says that the success of the police operation proves that the UK can do without a paramilitary riot squad akin to the French CRS, critics contend that the specially-trained and equipped support unit are tantamount to having one.

Further, there is concern at the extensive use of road blocks to prevent pickets pickets reaching pits Mr McLachlan estimates that 164,508 presumed pickets were turned away from Notts in the first 27 weeks of the strike, at the deployment of large numbers of police to shepherd strike breakers to work (an estimated 1,500

> The argument over policing of the strike will go on for some time to come

officers escorted one man into Corton Wood pit, South Yorkshire, on one occasion) and at the imposition of curfew-type bail conditions on men and women on remand.

Allegations of violence by police are rife and are documented—some on film—yet no officer has been charged with any offence. More than 400 complaints against the police are on file. The incidents of arrests are massively up on any previous industrial dispute, yet about half of all charges have related to conduct likely to cause a breach of the peace under section 5 of the Public Order Act 1936.

Unease at this is not restricted to those on the Left. The Police Federation says its members have been obliged to resort to "rigorous" enforcement of the criminal law, because of the major employers' failure to use civil law on picketing and, to the use of archaic charges such as "besetting" because *of shortcomings in public* order legislation.

The third area of debate centres on relations between police authorities and their Chief Constables. Because of the unprecedented role of the NRC, some Labour-controlled authorities have felt that local accountability has been undermined. This has led to clashes over the provision of information about deployments and over funding.

Policing

Two authorities — Greater *Manchester and Merseyside*—censored their Chief Constables and South Yorkshire at one stage stopped paying strike-related bills. Contrary to some expectations, however, the dispute has not been Labour authorities attempting to intervene in deployment policy on a broad front. Where attempts were made to do so through budget control, the experience has done nothing to clarify the provisions of the 1964 Police Act on police authority powers and responsibilities.

The argument over policing of the miners strike will go on for some time to come. Mr Leon Brittan, the Home Secretary, is expected to order a review of all aspects of the police operation and he has already indicated his interest in bolstering the position of Chief Constables against action by their police authorities.

However, the Police Federation, may be *disappointed in its hope for major reform of* Public Order legislation. As Mr Brittan told the Conservative Party Conference last autumn: "What we are facing *is not, essentially, a problem* of law but a problem of order—that is of enforcing the law.

NCB

The break with past practice

BY JOHN LLOYD, INDUSTRIAL EDITOR

THE FUTURE shape and strategy of the National Coal Board has already been mapped out in board meetings over the strike period, which have looked more to the rosy future than sighed over the awful present.

Mr Ian MacGregor, NCB chairman, and his colleagues have created in embryo an industry which, in important ways, will break with past practices: it will conform to the chairman's insistence that it must be a business, not a monolith dedicated only to production.

The guiding philosophy of that monolith, created by the Coal Industry (Nationalisation) Act of 1946, was that all the coal which could be produced would be used.

The new philosophy is that the amount of coal produced must be dictated by the markets available.

The old philosophy was fading in the early 1970s: the oil shock of 1973 gave it a new lease of life, and the 1974 Plan for Coal, with production targets rising steadily from 120m tonnes in the 1970s to 200m tonnes by the end of the century, set in concrete.

The board officials developed into a cross between civil servants, academics and industrial firefighters. Now, they are to become executives, the kind of people that could just as well sell desk-top computers as coal.

The structure underpinning *this philosophy will conform* to Mr MacGregor's guiding tenet that the health of a business depends on strong managerial leadership.

This means:

● Devolution of power. The directors and managers will be told they must take over more of the functions which the centre have handled — industrial relations, financial and physical planning, some marketing. They will be encouraged in this by incentives: it is proposed that they will share from the profits they make or the losses they cut by cash bonuses.

● A slimming of the centre. Since many of the functions will be sent out to the coalfields, the big Hobart House headquarters will be trimmed down. *Marketing will still be done centrally,* since the overwhelmingly dominant customer is the Central Electricity Generating Board — but operational and technical control will be sent out to the fields. Two years after the National Union of Mineworkers, the NCB has also decided that the best place for those concerned with coal production is in the coalfields.

The chief executive's office — composed of Mr MacGregor and Mr James Cowan, deputy chairman — will remain the strong central control. It will no longer operate through the network of managerial committees which Sir Derek Ezra, chairman for most of the 1970s, developed to assist consensual management. The centres of managerial power will thus be the chief executive's office; the area directorate; and pit managers' office. The other services will act in support.

The board will be, as now, dominated by part-timers with their own business interests — Mr MacGregor has, probably permanently, broken the hegemony of the long-serving mining engineers who are rewarded by board appointment. No longer will there be duplication between board-level functions and director-general just below board level: already, the functional directors now being appointed or reappointed are at the top of their trees: where they have a board member responsible for that function — as personnel — they are clearly number two.

● More direct control of the mining labour force. Managers have made it plain they expect a tighter discipline, a better work rate and less obstruction than before the strike: the biggest of their headaches after the strike will be the antagonism between those who stayed out to the end, and those who went back early — though some managers say they don't believe this antagonism will materialise.

They may be helped, at first, by moderates replacing radicals in branch *leaderships. Managers* believe this *will* happen — but most also believe they will gain at most only a two-year grace period before the more determined radicals win re-election. In that time, they will try to greatly increase the work rate, which means getting up the amount of time coal cutting machines work on the face.

Naturally, their chairman looks to the U.S. for inspiration. In the American mines, using similar equipment to the NCB, machine time can be twice that of the UK pits. The face workers there benefit as well as the coal owners: they can earn about $40,000 a year.

Mr MacGregor wants his men to start rising to that kind of level: with very high productivity *he could well afford it.* But the surface, and other underground workers, who would be doing the same as now, would not reap their time-honoured differential: the key *workers alone would get the key* bonuses.

That presupposes an NUM prepared to show a flexibility it has never had to contemplate and one that runs directly counter to the leadership philosophy it has adopted over the past three years. It will probably mean further, at least local, struggles as managers seek to get round the normal, cumbersome consultative arrangements and reach out directly to their men without the intermediary of union officials.


Mr Michael Eaton, the Coal Board's spokesman

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Lessons of the strike

NO-ONE would have predicted a year ago that the miners' strike then just getting under way would have been coming to an end only this week. No-one would have predicted either the manner of the conclusion: a return to work without a settlement.

Mr Arthur Scargill, president of the National Union of Mineworkers, confidently predicted victory almost to the last. The Government and the National Coal Board were prepered to make compromises. Indeed there were several times when Mr Scargill could have accepted very attractive terms for his members but turned them down.

So much for the conspiracy theory of history. Far from the Government seeking a confrontation with the miners, it has won largely because of Mr Scargill's intransigence.

It is important to define what winning means. In the first place, it has been shown that tha Government and the country at large can stand up to a major strike accompanied by violence and intimidation on a large scale, without caving in and without aerious dislocation. That marks a change in recent British history.

Second, it is unlikely that there will be such a strike again in the foreseeable future, either by the miners or by any other large union. If the miners cannot win an outright confrontation it is improbable that anyone else will try. The power of the big unions has been at least temporarily reduced, which was one of this Government's original aims.

With hindsight it is obvious that the balance of forces was tipped on the Government's side. Coal stocks were high, especially at the power stations, which was where it mattered. The miners were not united; some of them went on working. There was no energy crisis as there was during the last major coal dispute in 1973-74. This time the price of oil was falling sharply and Britain has become a country rich in energy resources. Not least the other unions declined to back the NUM on any significant scale.

Yet there were occasions when it was touch and go. The violence on the picket lines could have become more out of hand than it did, perhaps leading to a breakdown in the normal rule of law. If Nacods, the pit deputies union, had joined the strike, as once seemed possible, coal output could hava come to a standstill. And tha Government could not, and did not, know in advance how limited the support from other unions would be.

Moreover, sitting out the strike has had its cost: social as well as economic. Communities have becoma divided between striking and working miners. There is a division in the country hatween those who have sympathy with the NUM's demand to preserva jobs and those who wish to quicken the pace of change. On the economic side it has proved possibla to import coal, and to move more of it hy road rather than by rail—the rail unions have been one of the few to have hacked the NUM with action rather than words. But there was still a price to be paid. Imports and the increased use of road haulage were an expensive improvisation rather than a lasting solution.

Politically it is unfair to blame the Lahour Party for not knowing what to do about it all. Mr Stan Orme, the Shadow Energy Secretary tried very hard to bring the parties in this dispute together, in any normal circumstances he would hava succeeded on the basis of compromise. So would the Advisory Gonciliation and Arbitration Service and the TUG, whose new general secretary, Mr Norman Willis, made a courageous attempt to reach a settlement. The trouble is that the circumstances were not normal. Mr Scargill did not want a compromise and succeeded against most people's expectation in taking his executive with him.

Still, in the short term at least, Mr Scargill has lost and the Government has won. Too many miners went back to work for his resistance to pit closures to remain tenahle.

Even if the victory was achieved more by good luck than hy good management, it should not lightly be thrown away. There is now an opportunity to run the coal industry as a business, as Mr Ian MacGregor, the NCB chairman, originally set out to do. It should be possible to close the least economic plts, using the formula agreed with Nacods of allowing an impartial assessor into the discussions on whether a plt is economically viahle. Thera are no fixed criteria for closures, and the more decentralised the discussions are the better. If local managers are allowed more autonomy there might be some marked improvements in productivity and perhaps in industrial relations as well.

It is important that pit managers should regain the right to manage, but lt has to be management by consent. As in other industries faced with structural upheaval, the management has to convince employees that modernisation is in their interests, to find imaginative ways of easing the impact of change and to encourage local initiatives which will bring new sources of employment to mining communities. All this is as great a challenge as tha defeat of Scargillism.

The Alliance alternative

THE SDP/Liberal Alliance's Budget proposals deserve serious consideration. So long as unemployment remains et current levels, rational alternatives to the Thatcher Government'a present approach can and must be debated.

There are three main planks in the Alliance alternative. First, Britain would join the European Monetary System and hope thereby to maintain a stable and competitive exchange rate. Monetary policy would remain qulta tight partly because of the discipline imposed hy EMS memhership.

Second, the UK would shift to a slightly more expansionary fiscal policy. There would not be a reckless expansion of spending; under simulations performed on the London Business School model, the Public Sector Borrowing Requirement would at no point exceed the expected out-turn this year although it would exceed the targets laid down in the Medium Term Financial Strategy.

The point of the modest fiscal expansion would be to finance a serics of measures which the Alliance hopes would have e significant impact on unemployment. It would like, for example, to increase puhlic sector capital spending by about £1bn, cut employers' National Insurance contributions by 1 per cent, spend an extra £700m on joh schemes such as the Community Programme and invest another £600m in skill training

The Alliance is thus suggesting that the Chancellor spend an extra £2.5bn this year over and above an assumed fiscal adjustment of £1.5hn and that ha gives this money away not in across-the-board tax cuts (which help everybody) but in ways targeted on the unemployed and tha needy. At a time of record unemployment, Tory wets may find thesa arguments seductive, particularly when such measures could be afforded without running the risk that public borrowing rises as a fraction of GDP.

Tha third plank of the Alliance proposal is more controversial. Dr David Owen and Mr David Steel are honest enough to admit that even a modest fiscal relaxation might result in faster growth of nominal wages and hence higher inflation.

The Alliance approach seems to be that pay controls would be devised hut not used unless they proved necessary. Two possible strategies are suggested: a wage freeze to hring down inflation expectations (this would be temporary) and tax inducements to persuade employers to show more restraint (this might need to he more permanent).

British experience of incomes policy has been unhappy, hut these suggestions do attempt to avoid known pitfalls. If a one-year wages freeze were able to rednce earnings growth from an entrenched 7-8 per cent a year to perhaps 3-4 per cent, the improved outlook for both jobs and inflation would justify the distortion.

The practical obstacles to any form of incomes policy remain formidahle. There would be no case for considering these and other unorthodox measures were lt not for the crisis of unemployment. More flexibility in the labour market, encouragement of small husiness and all the other micro-economic measures to which tha Government rightly attaches great importance will be alow to influence the level of unemployment. In the ehort term the Government has to be prepared to experiment and take some risks.

BRITISH ENERGY POLICY

Hard days ahead for coal

By Ian Hargreaves

LAST SUMMER, when the air was thick with rival plans to settle the coal strike, there was talk inside the Energy Department of preparing a Government statement on energy policy, as a potential background document for negotiations between the miners and the Coal Board.

It was an idle thought, never likely to get very far, since both sides in tha dispute chose from the beginning to define the coal industry issues at stake in the narrowest possibla fashion. The dispute began and has ended with inability to compromise over what constitutes an uneconomic pit.

As the strike progressed, even this question constantly slipped out of focus as the two sides wrestled with higger shadows: violence and democracy; the future of trade unions; management's "right to manage." Blurring into each other during tha year of conflict, it now requires an effort of will to look beyond these great social themes to recall that this was always supposed to be a dispute about the future of Britain's main source of energy.

It is to this matter, now that the strike is over, that attention will turn, although not, presumahly, with the guidance of any new statement on energy policy. The last Cabinet minister to make a speech on this politically unfashionable subject was Mr Nigel Lawson on June 28 1982.

Given the manner of the strike's conclusion, it also now seems unlikely that there will be any attempt either to negotiate or to declare a Mark III Plan for Coal—something the union could probably have won had it chosen to settle at an earlier stage. Thet, of course, does not mean there is no plan for coal, it merely means you must look harder to find it.

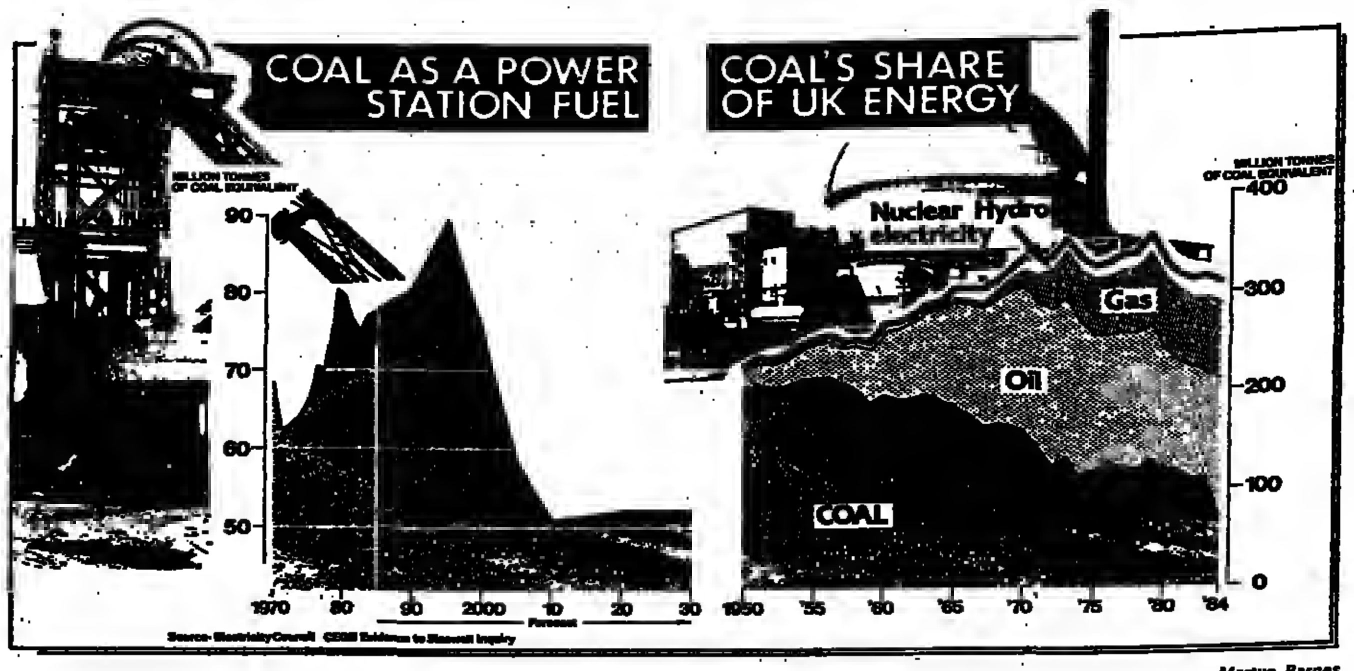
This phantom plan for coal is not, as Mr Scargill has occasionally imagined, anything so unsubtle as a secret list of mines to be closed. Nor can it be, as the Treasury sometimes seems to think, only a tightening financial corset with a target date at which the industry, hey presto, breaks even.

The future for British coal will, in practice, be determined by demand for British coal. Demand for British coal will be determined in part by its price and in part by the investment decisions of the coal board's biggest customer—the Central Electricity Generating Board.

Demand for coal will also be affected by Government decisions on the state-owned gas industry, by the sterling-dollar exchange rate, by Government policy on coal imports and by EEC policy on acid rain.

It is only when the debris of these major background issues is cleared that tha task facing the industry itself—to raise prodnctivity, rednce costs and become reliable—stands visible.

Although the Government has been careful not publicly to draw together the threads, the energy policy picture has been substantially re-woven in the last two years and even during the year of the strike itself.



Martyn Barnes

Two events stand out—the public inquiry, due to end this week, into the CEGB's plan to build a pressurised water reactor (PWR) at Sizewell in Suffolk and tha Government's decision to veto the import of $30bn of gas from Norway's Sleipner field.

The CEGB's case for Sizewell has not been made on the grounds that additional generating capacity is needed, but because the board says PWR power would be cheaper than coal as base-load for the system. It wants to build a series of PWRs and the Government is inherently sympathetic.

Government wants abnormally high stocks retained

The economics of the argument are finally balanced and depend heavily upon guesses about the future of world coal prices and the construction cost of the new power station. But the very fact of the strike has underlined daily the energy diversification argument for building Sizewell. At present, in normal times, 80 per cent of the board's power is generated by coal.

The impact of a programme of PWRs on CEGB demand for coal would depend upon the rate of growth in electricity demand. The CEGB has made a range of guesses and the chart illustrates those which emerge from the board's scenario C, "medium nuclear" future—which pre-supposes 1.4 per cent a year growth in GDP.

The effect in the early part of the next century is dramatic, as coal demand falls by 30m tonnes—over a quarter of the current market.

It is already clear, however, that the CEGB's and the Government's projections of electricity demand to tha Sizewell inquiry err on the side of optimism. The Government's avidence to Sizewell in 1982 put the range of coal demand in the year 2000 at a comfortable 100m to 128m tonnes, but four of the eight economic scenarios presented envisage electricity demand growing at the same rate or even faster than GDP.

It has become evident in the past three years, however, that this relationship between growth in demand for both electricity and energy in general and economic growth has been broken hy conservation and a switch in industrial structure

Last year the UK economy grew by around 2.5 per cent, allowing for tha strike effects, or 3.5 per cent without. Electricity demand rose by 2.1 per cent and energy demand fell slighty. Most energy economists expect electricity demand to grow in the next decade at between a half and a third the rate of growth in GDP.

The short-term power station market is also clouded by increasing output from the delayed nuclear reactors at Hartlepool, Heysham and Dungeness. Heysham II, with two 660 MW sets, is also due on stream by 1988. In addition, this autumn "le Link"—the 1,000 MW submarine cable between Britain and France will be ready for use. Originally, this was intended to be a two-way load exchange facility, but Electricite da France has offered to sell a base-load 1000 MW supply of its own surplus nuclear electricity at a price below the CEGB's own nuclear base load costs. An additional 1,000 MW will be available in the autumn of 1986.

The only definite bright spot for coal in the electricity market lies in repairing the damage caused by the strike. Power station coal stocks are down to 14.4m tonnes at the and of 1984—compared with 32m tonnes a year earlier and around 18m tonnes in winters hefore the Government prepared for a strike. The Government is determined that stocks should remain at abnormally high levels, in case Mr Scargill is resting rather than surrendering, although there is still disagreement about who should pay the £450m cost of the 10m tonnes of additional coal.

The bottom line for the Coal Board is that UK power atations will never again burn as much as the 89m tonnes of coal they consumed in 1980 and they may never get back to the 81m tonnes of 1983. The working assumption within Whitehall today is a figure of 73m to 74m

By comparison with power stations, the Coal Board's other markets are small beer. Of the 115m tonnes of coal output in a normal year (of which 15m tonnes is opencast), power stations use over 80m; coke ovens and other conversion processes 12m, industry 7m and homes 6m tonnes. The balance, between 6m and 10m tonnes a year, has been exported at a loss.

The Coal Board is fairly confident that it can keep its biggest industrial customers—British Steel and the cement industry—by offering better prices than importers, although there is some talk among industrial consumers of banding together to form shipping co-operatives to handle larger, more economic loads than are normal in the UK coal trade. Having re-secured this market, the Board's aim is to double its industrial market by winning business from heavy fuel oil.

This could happen, especially if the Government after the strike renews its capital subsidies for boiler conversion. Coal costs 20p a therm, compared with fuel oil at 38p, so the economics are right if customers can be convinced that coal is a secure fuel.

There is, however, another major uncertainty in the shape of British Gas, which has announced its intention of growing rapidly in the industrial and commercial gas market by selling low price "interruptible" supplies. British Gas's plan was to lock up its Sleipner imports for the 1990s and use that supply cushion to market aggressively (at a price of around 26p a therm for a more convenient fuel than coal) in the industrial market.

Anxiety about the consequences for coal of this strategy was one reason the Government vetoed the Sleipner deal.

Weakest link in UK's energy Security chain

The export market also, in theory at least, offers tempting opportunities. Western Europe's annual demand for coal is expected to more than double to around 160m tonnes by the end of the century.

But, the same factors which help keep foreign coal out of the UK — shortage of deep-water coal ports capable of handling cost-effective ships — helps shnt in exports. Also, British coal has too much sulphur, too much chlorine and too little calorific value for many markets. Italy, for example, the most rapidly growing European coal market, will not take coal with more than 1 per cent sulphur. Most British coal has 2 per cent. High chlorine content makes UK coal difficult to sell to cement makers. European anxieties about coal's role in causing acid rain may also yet curb demand — if it does not, it will certainly harm the economics of coal as a power station fuel.

In practice, is is difficult to compare the price of UK and foreign coal, since exchange rates confuse the picture. In its last annual report, the Coal Board itself produce a chart demonstrating that at £43 a tonne or £48 a tonne including interest charges, NCB coal could not possibly compete with South African coal delivered to Rotterdam at £25 and Australian coal at £31 a tonne.

Since coal is traded in dollars, the fall in sterling against the U.S. currency has, coupled with some rise in dollar steam coal prices, improved the UK's competitive position during the strike. But it is a fragile improvement; the end of the strike should of itself both reduce tha dollar price of international coal (by adding to supply) and, perhaps, boost the value of sterling.

What all this means is that, at best, demand for UK coal will be stabla in the next decade. At worst, it could begin a steady if gradual descent. With world coal in chronic oversupply and extractable cheaply in huge open pit operations, dollar prices of coal, like dollar prices of oil, are unlikely to rise in the next few years. So if the Coal Board is to improve its finances, it can only do so by continued heavy investment (£750m a year) and cutting costs, which is where Mr MacGregor comes in.

The ex-chairman of Amax, the U.S. mining company, has grown up in a nomadic industry where you dig the cheapest first and close pits down at the drop of a hat if the terms of trade move against you. It could not be further removed from the ethos of the UK coal mining industry.

Just how far the Government intends to pursua the MacGregor way is likely to remain a mystery for a time. There is no doubt that the ultimate implication of his approach is break-up and privatisation, but this is some distance away. Even carte blanche for imports — tha most obvious way to inflict market pressures on the Coal Board— is likely to be withheld on speed of change grounds. No one expects the industry to be re-shaped very rapidly.

This is not much cheer for coal miners as they return to their collapsed faces and buckled equipment. In one way, their strike and their leader were right; the only way jobs and high-cost pits can be saved is by the Government deciding to insulate the UK coal industry from global economic forces on the basis of some resource depletion or energy security argument.

Their problem is that by their action, they have underlined again that in comparison with nuclear power, oil or gas — none of them exactly risk free — UK coal supply is the weakest link in tha country's energy security chain. By winning this strike the Government has become the first since the war to secure permission to apply the laws of economics to the UK coal industry. Hard days lie ahead.

Europe looks to Scholey

Bob Scholey, the crusty Yorkshireman who is chief executive of the British Steel Corporation, has never been one of Whitehall's favourites. But he is becoming quite a star turn among his European counterparts.

Scholey, aged 63, has been devoting a lot of time recently to trying to improve co-ordination among European steelmakers. He is a prominent figure in Eurofer, the informal club of the big steel groups that has been trying unsuccessfully for years to form an effective EEC steel cartel.

It was Scholey who took Eurofer's case for the letest price hikes to the EEC Industry Commissioner, Karl-Heinz Narjes.

Some West German steelmen now say they would like Scholey to take up the lesdership of Eurofer when he retires from British Steel next year. Scholey's official departure date is still some time off and observers strongly douht thet he would leave before his 65th hirthday in October 1986. He is determined to see the corporation back into profitahility for the first time in over a decade in 1985-86.

But speculation is already rife about the succession at British Steel's Albert Embankment headquarters.

The current management structure, involving a non-executive chairman drafted from outside and a professional steelman as chief executive, is expected to continue. For the chief executive joh the shortest odds are on Gordon Sambrook, the ambitious 55-year-old head of British Steel's general steels group. Slightly longer odds ere available on Jake Stewart, aged 54, who runs the strip products group.

Stewart is one of the few remaining senior "hlue-hloods" of the steel industry. His family husiness, Stewart and Lloyds, was one of the steel groups nationalised to form British Steel.

Outspoken and gregarious Stewart has managed to keep his base in Glasgow. He is financially independent and may not be willing to move south.

Men and Matters

David Grieves, British Steel's thoughtful personnel boss, is considered a dark-horse candidate, having administered the swift rundown of the corporation's manpower in the last few years with tact and skill.

Both Grieves and Sambrook are, like Scholey, members of the so-called Sheffield "mafia." They were all executives with the old United Steels group which set a fast pace in the industry before nationalisation.

But it is unclear whether that pedigree matters much anymore.

Marathon man

Courtenlds' decision to group its clothing, fabrics and spinning activities under one main board means that Alan Nightingale, managing director, will almost certainly have to give up one of his great pleasures.

He has twice competed in the London marathon "and dona quite respectable times," be says modestly. Actually, he once came home in 3 hours, 45 minutes, which is fast for someone in his 50s.

All the extra travelling involved in the new job will leave him too little time for the serious training thet big marathons demand, even thaugh he has only to look out of the window of his home in Kendal to see some of the best training runs in the country.

His travelling now will be between home, office in Manchester, Courtaulds' operation in Nottingham, and an office ln London, where most of the customers gather.

"Putting all the textile activities together under one group, instead of having three dealing with fibres, fabrics and consumer products as before, does not mean we are going heck to tha vertical integration of the Kearton days," be says.

"What wo shall be doing is bringing out the synergy of the group. To compete we hava to hring out a higher standard of excellence." Rather like running the marathon.

"Only three measly days? The miners stuck it ont for just on a year"

Kardol's return

J. Bibby's new parent company, Barlow Rand, is losing no time in despatching one of its top managers from South Africa to take the chair at its subsidiary.

Bastiaan Kardol is being plucked out of his present job as head of Barlow's C. G. Smith subsidiary, which is itself South Africe's fourth-largest industrial company. In May ha will replace Bibby'a present chairman, Sir Leslie Young, who is retiring.

Kardol, who is also to become chairman of Barlow's new international division, is no stranger to Britain. He arrived at Barlow Rand as part of the former Reed subsidiary Nampack, which he had been sent out to South Africa hy Reed to re-organise in 1977. Before that he had been commuting hetween London and the Netherlands as managing director of Reed International Trading.

Sir Leslie will be a hard act to follow says Kardol. Nevertheless, he says, ha has ideas for giving Bibby a new perspective.

Born in the Netherlands, he claims to have found Afrikaans one of the harder languages to learn. The chance to recover his former fluency in French and German may cause him to think hsrder ahout Gontinental acquisitions than Bibby has done so far.

Slick brews

West Germany's hrewers, tha self-appointed guardians of national purity (they even persuaded the Government to ban the import of Belgian beer because, though it tasted fine, it contained additives) have discovered a rotter in their ranks.

Brewer Friederich Schaff, a Bavarian, bas heen discovered lecing his hrew with acetic acid, presumehly to keep it fresh. The unfortunata Schaff has heen fined DM 45,000 and has been drummed out of his industry association.

The story does not end there. The Germans are currently defending themselves in the European court against their decision to forbid imports of beer. But it is now revealed, as a result of the Schaff affair, that tha Bavarian anthorities have begun confiscating a host of local heers for analysis. One major Bavarian hrewer is under suspicion of doctoring 13 of his products. Another hrewer in the state of Hessen is under investigation.

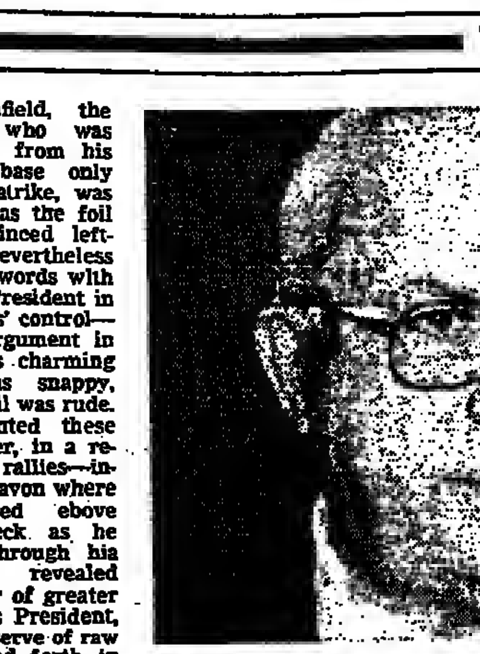
All this ale-sniffing is bound to sour the traditional Octoberfest in Munich. The local press has not bothered with the eubtleties of liquid preservetion and the like in reporting what they are calling the "Scandal." The additives are being quite simply described as "poisons."

With an average consumption of 240 litres of heer per German per year this ona promises to run and run.

Observer

It ground them down and out

By John Lloyd, Industrial Editor



Scargill took his stand on principle. MacGregor was shooting for the future. The strike has been farcical and momentous, cruel and noble

IT has neatly paralleled the seasons: the surging arrogance of spring, and "here we go"; the long glorious summer of bathing in sun and impending victory on the undisturbed picket lines; the darkening autumn, when the chill of unspoken defeat gripped stronger with every returning miner; the icy certainty of winter collapse, frozen in e rejectionist posture, unable to break back to the time when what had been contemptuously rejected was now desperately sought to touch the ending with "honour."

That is all that has been neat about it. It has been messy and contradictory, and its ending is too: it has been at once farcical and momentous, cruel and noble in the same minute. As the labour movement's self-appointed guards drag themselves back, finally, from the mouth of the guns, Labour rises in the polls. Revolutionary socialism's set-piece, post-war engagement ends with coffee for the TUC at Number 10. Some bishops seemed broadly for it, the working class broadly against it.

It has been all-pervasive, but for most people that has been because of the media. Much of the country watched the whole thing on television, with decreasing interest as the exciting episodes of "On the Picket Lines" of summer and early autumn were replaced by "Behind Closed Doors" in late autumn and winter.

It has, in the end, divided the country only into those who think it has divided the country and those who do not. Very few people indeed now believe in the miners' *case* without major reservations (believing in the *cause* may be something different). It is not that the Government has retained the support of the people: it is that the miners have not won it. People could not rid themselves of the feeling that, however much it was repeated that the miners' fight was that of all working peoples, it was directed *against*, not for, them.

George Orwell wrote, in "*Road to Wigan Pier*" (1937) that "You and I and the editor of the Times Lit Supp and . . . the Archbishop of Canterbury and Comrade X, the author of *Marxism for Infants* — all of us *really* owe the comparative decency of our lives to poor drudges underground, blackened to the eyes, with their throats full of coal dust, driving their muscles forward with arms and belly muscles of steel." Some of that still lingers, its freshness of insight transmuted into guilt — but not enough for the miners. Thatcherism has banished much liberal guilt. It was not enough to feel sympathetic for the miners: the omnipresent yellow posters demanded "Solidarity with the Miners" — and that was miner-turned-MP Dennis Skinner's bull roar, not miner's son-turned-party leader Neil Kinnock's careful discrimination between means and ends.

The upshot was that you had to swallow the entire project of the miners' strike whole, or reject it whole. It was a strike led by Manichees, who didn't allow the fainthearts to offer easy rhetorical support. It was black and white, light and dark, for them or against them on *their* terms. It was terribly hard on the 'buffers' in British society—the Church, the TUC, the intellectuals, the Advisory Conciliation and Arbitration Service, some of the National Coal Board's own officials—"Archbishop of Canterbury and Comrade X"—who tried to make it conform to the law that every dispute has a settlement. It wouldn't conform to their social model: it ground them down and out.

One of the many wits among the Welsh miners last month composed a joke which went round the coalfields in days: it was that there would, in the end, be only two people left on strike—one to go back to work and the other to shout "scab" at him.

It is certain that the person shouting "scab" would be Mr Arthur Scargill, the National Union of Mineworkers' President: in an interview with the FT on June 15, he said: "If I am the last person in the union rejecting the closure plan, then that will be my position. This is the important thing—if I know I'm right, I'll stick there. I don't know how some people can live with themselves if they fudge or compromise for an agreement. You either take your stance on a principle, and if it *is* a principle you don't back down—or you don't take the stance."

The mineworkers' president is of the stamp which negates all argument — including his own—that personalities do not matter, policies and events do. It *is* a matter of real doubt if *this* strike would have been possible, at this breadth and depth, without him — and in the comments above, he reveals part of the strength of the position he commanded, and may yet command for some time. No consideration is higher than the pursuit of principle, *even the continued existence of a union and supporters who could defend it:* and this remarkable purity was buttressed by the skills of a master tactician.

Yet when the strategy of the pure fight for principle came to be seen (by others, not by him) as disastrously wrong, he could not be prevailed on to change — "If I am the last person in the union . . . then that will be my position." To his many opponents and detractors within the Labour movement, this was the most colossal vanity: to him and his supporters, it was the very essence of leadership.

Mr Peter Heathfield, the general secretary who was elected to the post from his North Derbyshire base only months before the strike, was seen by very many as the foil to Scargill: a convinced left-winger, he had nevertheless crossed ideological swords with the then Yorkshire President in debates over workers' control—an old strand of argument in the union. He was charming where Scargill was snappy, patient where Scargill was rude.

But he disappointed these hopes. In November, in a remarkable series of rallies—including that in Aberavon where the noose dangled above Norman Willis' neck as he ploughed bravely through his speech—Heathfield revealed himself as an orator of greater effect even than his President, calling on a deep reserve of raw passion which issued forth in brutal savaging of other trade unionists and irresistible calls to "stand firm: we'll win."

Scargill gained much of his political education from the Communist Party as a member of the Young Communist League (one of his tutors, at London weekend schools on Marxism, was Frank, now Lord, Chapple): but more importantly in the "Forum," the *ad hoc* group of left-wing NUM officials and activists which emerged in 1967 and which—with Mick McGahey, the NUM vice-president as a vigorous and learned participant—dynamised the political consciousness of two generations of miners' leaders.

These men, many of them Communists, outgunned their centre and right wing rivals intellectually, rhetorically and often organisationally. They were not cut off from their roots by their position and self education: rather they expressed the radicalism of many pit villages. Scargill, about who many of them had reservations—especially McGahey, who lost his mantle of leader of the left to him, and who thought him adventurist—came from their midst and was more effective about gaining power for them *at the top* than anyone else.

The "Forum," now in some disarray, has proved to be as influential a grouping as any anywhere in British society since the war: Scargill was its apotheosis (and, some now fear, its Nemesis). It carefully cultivated young activists in schools and meetings: Scargill, when President of Yorkshire, characteristically went a stage further and encouraged the leading cadres from the pits to go to Sheffield University and Polytechnic, and to Ruskin College, Oxford, to take courses in industrial relations, economics and politics: many of them returned, to lead their members out on strike in March 1984.

The men they lead into this defeat were not, of course, Marxist-Leninists from a socialist-realist agitprop poster. Indeed, much commentary about miners before the strike played on their new social status: their mortgages, their cars, their second-job wives, their Majorcan holidays. The comforting implication was that Orwell's steel-bellied proletarians were now as soft and moderate as the rest of us.

But that was as misleading as still believing Orwell. Mineworking is still a job of stamina and courage, naturally breeding solidarity: pit village life reinforces the pit relationships. When the Metropolitan Police were sent to collieries in West Fife, Doncaster and Gwent, they

'You can't have people putting themselves above the law'

were seen as invaders by men and women who had earlier felt at least a little outraged that their new employer talked with the nasal twang of a villain from "Dallas."

Brian McCormick concludes his study of industrial relations in the mining industry with the sentence: "Mining . . . indicates the tremendous inertia that pervades industrial relations. Despite nationalisation, mechanisation and other sweeping changes, the NUM is, like its predecessor the Mineworkers Federation of Great Britain, concerned with the preservation of the individuality of pit villages."* At the heart of the most radical of unions is the most conservative of cries: let us stay as we are.

Time and again, in the miles of film and tape which distanced the rest of the country from the strike, men and women from these areas are heard to endorse the Victorian values the woman some of them had voted for commended to them all. A young miner on a picket line at Kiverton Park early in the strike said that the closure of the pit, and the dispersal of the mineworkers, would mean the importation of the malaises — drug taking, crime—which he thought of as confined to inner cities and to places which, as he put it, had "lost their heart."

This was real, this sense of being a culture besieged: it meshed in well with the radicalism of the leaders, since it bed villains in common: the Board, the Government, the media, the police. The imagery betrayed the reality—from the christening of the pickets' shelter outside Cortonwood Colliery (the moral centre of the strike, because its threatened closure helped spark it off) as "The Alamo," to the striking simile employed by Scargill last Sunday, in Trafalgar Square, likening the movement against pit closures—which would (he said) continue—to the resistance movements of the last war.

It was perhaps as much to do with a range of cultural and social factors—their own relatively higher incomes, the fragmentation of communities, the insecurity engendered by mass unemployment, especially in manual workers and their families—as with the plan, published on March 6, to close 4m tonnes of capacity from a total of around 100m. The important thing about it was, it could be mobilised.

Or some of it. In Nottinghamshire, it could only under certain conditions. Its labour traditions were non-radical: its miners had ended the 6-month strike of despair in 1926 by producing, from below, a collaborationist union movement led by the Labour MP, George Spencer: in May 1983, a Conservative, Andrew Stewart, took Sherwood, the most-mined constituency in the country. As the areas across the country fell like dominos to the NUM leadership's refusal to be "constitutionalised out of action" (as McGahey growled at the strike's beginning), Nottinghamshire's left-led executive tried to follow suit but was pulled up—from below.

On the morning of March 12, Yorkshire pickets crossed the Notts border to Harworth pit in the north of the coalfield: by the second (afternoon) shift, some 150 had gathered outside the broad road that swept into the pit. The police were there, but in no great numbers and with no show of riot gear or armoured vans. The leaders among the Yorkshire men were allowed to approach the Harworth men as they walked or drive in: they said—"We're asking you not to cross our picket lines. This is a fight to save our jobs. It's your fight as well as ours." About a third turned back, to cheers: the rest went in, and the chant of "Scab-scab scab" began. Across the road, a group of women kept up e constant flow of insults and obscenities, directed at the pickets.

Both the men who went in and those who turned back looked ashamed: one, at the back of a coach which had turned back with some half dozen men in it, held up a fist, loosely clenched, to shoulder level: his mates stared ahead of them. The Harworth branch officials hung about the gatehouse, embarrassed: they made calls to Yorkshire's Barnsley headquarters to try to "sort this one out." They clearly wanted to be left alone: the Yorkshiremen were invading *their* village. Three days later, in a running fight between Nottinghamshire and Yorkshire miners at nearby Ollerton pit, David Jones, a Yorks miner, was killed. His photograph, dedicated to the NUM President, faces Scargill's desk in his Sheffield office: he is invoked in many of his major speeches, even now.

Three weeks later, 72 per cent of the Notts miners voted against striking: it was a revolt from below again, nearly half a century on: their leadership, at branch and area level, was generally leftist, strongly for the strike, a posture which was to cost most of them their posts in later elections. Their area President, Ray Chadburn, Scargill's main rival from the right in the Presidential elections, trapped miserably between his national and area loyalties, threw his lot in with the left which had destroyed his national political base: returning from the Sheffield special delegate conference which effectively proclaimed the strike a national one, and from being badly mauled by furious pickets outside the NUM headquarters, he got out of his Rover at his Mansfield office and told his members, via the TV cameras, to "Get off your knees" and strike.

They got off their knees, but not to strike. The working miners were born then, of rank and file opposition to a leadership marching to a different drumbeat than theirs. They met secretly, in pubs, under police protection and with Board assistance: they were quickly made into folk heroes by the Government.

A man named Chris Butcher, nicknamed Silver Birch, toured the other coalfields like a John Le Carré creation in Eastern Europe, meeting small groups of dissidents in pubs or living rooms. The flame *did* spread: Ken Foulstone and Andy Taylor, Yorkshire miners, lived behind round-the-clock police guard as they took their case to force a ballot to Court early in August: their victory, and the ensuing fines for contempt and sequestration of assets was like a slow gangrene on the NUM's ability to manoeuvre.

The working miners' leaders —as Roy Lynk and David Prendergast at the Mansfield headquarters, Colin Clarke and John Liptrot on what became the National Working Miners' Committee—were forced to define themselves politically in a way they would normally have preferred not to do. Liptrot, talking to the FT early in August, likened his and his colleagues' stance to that taken against Fascism, Clarke, in December, said "You can't have people putting themselves above the law. That's anarchy."

Like their ideological foes from the "Forum," the working miners' group had the self confidence of men who had tapped their members' resistance to outside interference. The police and the Board, who gave them time off for TV interviews and legal consultations, were their allies, as were Conservative MPs and businessmen: men in Notts pits demanded forms to "contract out" of the political levy, and Labour Party membership fell. But most did not see the matter as particularly political. They had not wished to enlist: they revolted at being pressed: they could not share the battle fever of the young Yorkshiremen.

The working miners' gangrene was slow to spread but was very comprehensive in its effects: especially on other parts of the union movement. The continued operation of the Notts, and the contiguous, small Leicestershire and South Derbyshire areas, was a standing reminder that a national strike had been attempted without a national ballot: and a tremendous excuse for inaction by other unionists. Everything was on this excuse's side—decency, democracy, most of the estates of the realm, self-interest, cupidity and common sense.

But Scargill made it worse. He had a real contempt for most other union leaders. When he expressed bewilderment as to how "people can live with themselves if they fudge or compromise," he means them above any others. Ideologue that he is, he would go only to the leftwingers for aid: of Bill Sirs, the rightwing steelworkers leader, he merely demanded it: of the TUC, he wanted nother at all.

Len Murray, TUC general secretary for the first half of the strike, had before it began seen the collapse of "new realism" when his passionate efforts to stop the Prime Minister banning unions at the Cheltenham communications centre ended in a flat humiliating negative. He had some private regard for Scargill's qualities, but none for his strategy: he believed the miners' President nursed the grudge of TUC "betrayal" in 1926. He was in no mood, or state, to tread where he was not wanted: he knew his affiliates' members were of the same mind. In his last months of office, Murray was increasingly preoccupied with what for him had become the central dilemma of his secretaryship: how to bring the aspirations (that great union platform word) of union *leadership* into line with those of union *membership*. He told the FT a week before he passed the carthorse reins to Norman Willis: "The task continues—to make sure that we're representative . . . otherwise we're nothing. We're merely passers of resolutions—spitters into the wind."

The TUC, in the week following that remark, gobbed mightily into a gale. Its resolution, craftily designed to (a) prevent splits and (b) to bring the miners under the TUC's tutelage, had to promote "total support" with only a little weasel piping up that this was only if unions wanted to give it—no rough stuff. Eric Hammond, the electricians' general secretary, came to the rostrum to tell the Congress that it could not deliver, was not representative—and was rewarded with a great howl of outrage. ("Hitler would have been proud of you lot," he howled back.)

The union activists and officials did not want to know about delivery or representativeness: here was a fight at last. They owed the Government nothing: even the moderates, like David Basnett and Terry Duffy, were free of the nagging obligation to this policy or that minister. They were out in the cold and if Scargill was a madman—so what? Number Ten had a crazy woman in it who could not recognise a statesmanlike gesture when realism was waved in her face—so, let slip the dog(s) of war!

The steelmen, by the time the TUC was a-howl over Hammond, had already put up the shutters and were working on: they had even asked their management to use the Tory Employment laws against the miners blockading their plants —a request the Government which passed the laws told the steel corporation gently to refuse. The power workers, the workers closest to the country's jugular, were exhorted by some of their leaders to stop fuel at the power station gates: a few did so, most did not. The generating board, spending big on the oil spot market, pumped half a million tonnes of oil a week through white elephant stations, and burned most of its coal in Notts' Trent Valley stations, buffered by working miners: the huge stocks in the others lasted the course.

In December, as the depth of solidarity's failure became clear, McGahey—representing the NUM on the general council because his President could not bring himself to sit among the despised—growled at his fellow councillors that there were three kinds of leader round the table: the honourable men who tried to bring out their men and succeeded—Jimmy Knapp and Ray Buckton of the railmen, Jim Slater of the seamen—the honourable men who tried and failed—Moss Evans of the transport workers (whose members had roared through picket lines waving fivers at the pickets)—and "the dishonourable men who never tried": Hammond of the electricians, John Lyons of the power engineers. Sirs of the steelmen—bow your heads for shame.

Actually, these men feel less shame than *schadenfreude*. Lyons told a radio interviewer last week that while he felt "deeply sorry" for the miners, he and some others had at least left them with no illusions.

This has been the TUC's worst year since the war. Paralysed at the centre by sectarian inertia, its only leadership figures—Murray and Basnett, one retired and the other going—unable to command consistent support, it was able neither to act on the pessimism of its intellect that nothing could be delivered, or the optimism of its will that the miners would get "total" (or even partial) support. It has become what Murray feared for it: worst of all, it was not beaten by the sheer efficiency of the Government and its agents, but by a mighty surge of apathy and slightly (only slightly!) guilty inaction from below. The emergence of "new forms of struggle" in the Women Against Pit Closure Groups, the various miners' support groups, the comprehensiveness of the collections for the miners—especially from the printers' unions—all of these have been of some moment.

But the women shouting "Go home you bastards" at the Yorkshire pickets outside Harworth were just as powerful a social force: and after all, the working class did not move.

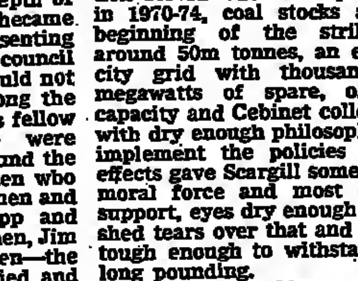
Few can have felt that more keenly than Neil Kinnock, the miner's son who has had to keep the Labour Party at some distance from the NUM. By all accounts he has suffered a good deal from this strike: some say its cauterizing effects have helped him complete the metamorphosis from lefty boyo to leader which he began when he split with Tony Benn in the early 1980s. "We meet here tonight under the shadow of an outrage," he told a party rally in Stoke in December on the night after a Welsh taxi driver was killed while driving a working miner to his pit: many outside and some inside the party thought the outrage slow to show. He and Stan Orme, the patient energy spokesman, ran every kind of settlement formula through and in the end could achieve nothing.

On November 1, 1926, in the closing days of *his* strike, Arthur Cook, the miners' secretary, went to Pendleton to tell the Lancashire miners that: "You have been fighting against the legions of hell. You have been fighting against the Government and all the forces of the state and even some of the trade union leaders." He used the same rhetorical passion as does his successor and namesake—and Arthur Scargill found legions of hell every bit as demonic as Cook.

The Prime Minister was less emollient, on the whole, than Baldwin: where he had impatient hawks in his cabinet, as Birkenhead and Churchill, she was, and is, chief of the hawks' faction. Further, Baldwin had never known a Government which had been broken by union power, and did not treat the TUC leaders — most of them with the major exception of Ernest Bevin, were rather deferential—with much respect: Mrs Thatcher was a member of just such a broken Government, and matured in an era of waxing union power.

She had lived much of that down before the miners' strike, forced the unions partly on to her terrain—a major cause, that, of Scargill's contempt for his colleagues. She probably never saw the TUC as allies in this passage of arms: but by December, Peter Walker, the Energy Secretary, did. By bringing the TUC liaison group into his Millbank office in December, he was gently drawing them on to his "side": by the end of last month, after the TUC's best efforts to get the Board and the NUM talking were impaled on the steel tip of the miners' pride, he was talking of them almost as comrades in arms against the Scargillite foe. It was a piece of opportunism which they rightly resented, but which they partly created.

Thatcher and Walker were not natural political allies, but showed few signs of strains over the miners' strike. Walker



'We're merely passers of resolutions—spitters into the wind'

had the best kind of preparation for it: Cabinet experience in 1970-74, coal stocks at the beginning of the strike of around 50m tonnes, an electricity grid with thousands of megawatts of spare, oil-fired capacity and Cabinet colleagues with dry enough philosophies to implement the policies whose effects gave Scargill some of his moral force and most of his support, eyes dry enough not to shed tears over that and nerves tough enough to withstand the long pounding.

His main problem was his chairman of the Board. Ian Kinloch MacGregor, now 73 and going strong, was brought back from a 40-year visit to the U.S. first to be deputy chairman of BL, then to chair the Steel Corporation, then to crown his career with the laurel of the Coal Board. A Reaganite Republican who can still vote in Florida, he took on the NCB at the end of a career which had been distinguished for the vigour with which he pursued the spread of free enterprise around the world — a vigour which remains: he told the Institute of Directors last week that business leadership was the economy's motive force. He came to Hobart House as a 16th century Scots Calvinist to a nest of Papist corruption: he saw the NUM as much less of a difficulty than his own managers, who returned the compliment.

When he told the FT in August that, "The coal industry has I'm afraid evolved a feeling that it can be isolated from the . . . community as a whole, it can operate in a vacuum, if you will, and set its own conditions for that operation. I don't think that is a valid long-term principle" — he was talking about management more than men. While his much admired (by him, too) predecessor, Sir Norman Siddall, began the task of chopping back the uneconomic "tail" of pits, MacGregor marked the real break with the tradition since the 1946 Coal Industry (Nationalisation) Act (McCormick notes that it embodied many of the principles of Morrisonian socialism). He was wholly uncommitted to Morrisonian or any other socialism: he wanted it to be a business, and had no qualms at all about privatising it. Further, he had a vision and a goal.

He made it clear in April, soon after the strike began. He said, "Low cost energy is going to be the key to the economy's future — of all the West European countries, the UK is the only one with the potential of future large-scale production of coal at low cost." He was looking to a future where coal, carved out of thick-seamed, highly mechanised pits by high-paid miners whose energies were spent at the face, not at Ruskin College, would provide fuel at prices competitive with both foreign coal and nuclear power.

He feared that France, with low-cost nuclear-derived energy, could by the end of the century attract to it much of Western Europe's basic, power-hungry industries. He was talking about the future well-being of the people of Britain, no less, and he could not understand why miners, union leaders, Labour politicians, commentators and others could not grasp it — the more so since the miners, who bore the brunt of the upheaval this strategy demanded, were getting the best payoffs in British industry for their trouble.

All of this was fine with the Government, and they greatly admired him for it. But as the strike wore on, it became clear he was not putting it across, and that Scargill, the darling of the media he reviled because he was such good copy, such a good performer. MacGregor, whose beliefs included strong support for a free press, grew to detest the free pressmen and women who contorted and popped and snapped questions at him as he walked, weary but straight, from his limousines to this or that grinding negotiating chamber.

He was awful on television. All of his dry wit and crisp intelligence was bleached out to curt uncommunicative woodenness. He could only be stirred to talk about the future.

The trouble was that he was a tough opinionated old millionaire who had a high sense of responsibility but didn't give too much of a damn for the civilities of British public life. He also said one thing one day—let's have a ballot, organised by the NCB—and his aides had to say another—such as the chairman was thinking aloud that evening. Walker was sometimes barely civil about his chairman, and his departmental officials felt emboldened enough to do some eye rolling about MacGregor in public. MacGregor accepted that he was a public relations disaster, and brought down Michael Eaton, the engagingly bluff North Yorkshire area director, one of his best men, to run communications. After a humbling start, Eaton became the voice of the NCB — concerned, soothing, straightforward.

It was conventional, last October, to wipe MacGregor out: might stay still after the strike, old boy, but out on his end after that. Not now. He hung on, shielded by Eaton from the glare, to lay his plans for an industry which will be (if he succeeds, and there is presently little to stop him) quickly shorn of the worst loss-makers, with much responsibility devolved to area level, and a new Plan for Coal with no awkward targets, no anti-market Morrisonian socialism on the drawing board within days.

His most intimate battles have been inside Hobart House: his press director, Geoffrey Kirk and his industrial relations director, Ned Smith, both left bitterly: both, after all, were Morrisonians and their principles and practices could not mesh with their chairman's.

In the spirit of these battles, if not always in the detail, he had the Prime Minister on his side—at least after the dangerously soft line of late summer, which luckily for the Government the NUM spurned, toughened to the harder and harder position of late summer. When the Prime Minister uttered her terrible cry "No fudging," she was striking at the Morrisonian heart of Hobart House, which had lost fortunes over the past decade making the best fudge in town. MacGregor was shooting for the future: Thatcher was putting a sword to the past: both agreed on the means.

In May, Kenneth Ambler, a belt maintenance worker at Selby's Wistow mine, told the FT: "We will win. It might take till Christmas but we *will* win. It won't give us any satisfaction because it will have hurt us. But at least we'll be able to walk down Selby with our heads held high."

Many thousands of miners believed that victory in this strike was a great collective ambition. It has been frustrated: what happens as that common hurt works its way through the scarred, defenceless villages?

* *Industrial Relations in the Coal Industry*, B. J. McCormick; Macmillan; £15.

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Lombard is on page 29

FINANCIAL TIMES

Monday March 4 1985

Terry Byland on Wall Street

Memorable times for the dollar

LAST WEEK was a week to remember in the New York financial markets – or perhaps a week to forget, depending on where you were standing when the juggernaut passed through. The sudden plunge in the dollar shook the bond trading houses so severely that on Wednesday evening several of them decided to cut their losses and throw on to the market portfolios swollen with the indigestible remains of two unsuccessful treasury auctions.

The stock markets, however, refused to be unsettled by the upsets in the foreign exchange and credit markets. After a pause for profit-taking, blue chips forged ahead again on increasing turnover. Friday afternoon saw the market push through the 1,300 level on the Dow Jones industrial average in a blaze of glory, before settling just below this point. The second line issues, while slower to follow than previously, joined in at the end of the session.

Mr Donald Trott at Mason Nugent believes that the major investment institutions have almost certainly increased the equity content of portfolios since January. He suggests that the equity content has risen from 57 per cent to around 67 per cent, which would be at the high end of the range for tha past year.

Investors in the stock market kept their nerve last week because they looked at the optimistic side of Mr Paul Volcker's address to the House sub-committee. Inflation remains low, and the danger of a recession seems to have faded away. An orderly and prolonged fall in the U.S. dollar would help sales and profitability in several major industrial sectors.

As Mason Nugent put it, Mr Volcker's comments "actually reinforce" belief in bright prospects for continued economic expansion. At First Boston, Mr Suresh Bhirud is looking for gains in corporate profits of 7 per cent to 10 per cent this year, higher than some estimates at the beginning of the year. His projection of a 1985 market selling at ten times 1986 earning suggests a gain in the Dow average to the 1,530–1,680 range.

Looking further ahead First Boston expects real interest rates to crumble, bringing forward what the firm calls its "on a clear day you can see 2,000" scenario.

There are, of course, just one or two potholes to be negotiated before putting the stock market on auto-drive, and interest rates could be the first. Ever since Mr Volcker's first comments to the senate, the credit market has been signalling that it will not wait for the Fed to chance direction. Despite Mr Volcker's repeated assurance that the Reserve board is not yet tightening credit policy, despite endless liquidity help to the money markets, rates have moved up as the market mechanism showed every sign of doing what it thought the Fed intends doing later this year.

With short-term rates firming again last week, narrowing the spread between CDs and bank prime rates, it is hard to see how the stock market can sustain another bull phase just yet.

Nor can every sector of the market expect to share in the general rejoicing. Consumer issues continue to lag badly as deflation makes the customers price resistant and margins trimmer.

But Friday's surge showed that there are plenty of sectors ready to lead the way forward. High-technology stocks, with IBM still retaining its hold on the affections of both private and institutional investors, would benefit both from a lower dollar and a stronger U.S. economy.

Both the airlina and rail sectors continue to bounce back from bouts of profit-taking.

The financial sector, having outrun the industrial market earlier this year, still has windows of opportunity.

The stock market is taking the view that any damage to corporate profits from a renewed rise in interest rates is some distance down the road.

Indian tax raids pose threat to diamond trade

BY JOHN ELLIOTT IN NEW DELHI

INDIA'S diamond merchants are this week threatening to cancel imports of rough diamonds from Europe worth \$25m-\$35m for the second time this year unless the Indian Government stops a series of raids by tax inspectors on their premises in Bombay.

The raids are part of the concerted attack in India's booming black economy launched by the Government in the past few months at the instigation of Mr Rajiv Gandhi, Indian Prime Minister.

Businessmen believe that the country's budget on March 16 may clamp down on expansion of the black economy and include inducements for people holding black money to legalise their wealth.

Business premises, including construction, furniture, computers and other traders, have been hit in a series of tax raids in recent weeks. In a parallel exercise, smuggled gold worth over \$10m has been confiscated by customs officials in the past month.

In Bombay, 30 diamond merchants have been raided in the last six months and diamonds worth \$4-\$5m have been confiscated by tax inspectors because no records of their ownership were immediately available.

The merchants say the diamonds were being held temporarily under the internationally recognised "bailment" system covering goods sent by one trader to another for inspection. The tax inspectors did not accept that argument and removed the diamonds for inspection.

India is the world's largest exporter of cut and polished diamonds, which last year totalled over \$1bn. It imports all the diamonds in rough and uncut state. The trade is centred in Bombay and is controlled by seven families whose relatives have set up parallel businesses in the world's other main diamond centres such as Antwerp.

Because the business is so closely controlled, the Government assumes that much of the companies' trade does not show up on invoices and is carried out in the black market. That is denied by the merchants.

On Saturday, 65 leading merchants met in Bombay. They decided to ask the Diamond Trading Company (DTC) of London, the marketing arm of De Beers Consolidated Mines of South Africa, to postpone to March 25 its "sight" due tomorrow of diamonds worth \$25m-\$35m that would be bought on April 1. If the company refuses the postponement, the merchants will meet tomorrow to decide whether to cancel the purchase.

The "sight" takes place every five weeks and the last one, due for purchase in the third week of last month, was cancelled by the merchants because of the tax raids.

The merchants hope that their action will cause enough concern in the Government about the prospects of an important export industry being crippled for their problems to be solved once the Government has emerged from this week's State Assembly elections and the annual budget. They hope the Government will move fast enough for the "sight" to be taken up on March 25 if the corporation agrees to the postponement.

The merchants want the Government to agree to recognise the "bailment" system. That would mean that merchants would be able to hold diamonds they had not officially imported or bought without having them confiscated in future raids.

Norsk Hydro excludes banks in novel borrowing scheme

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

NORSK HYDRO, the energy and petrochemical concern which is 51 per cent owned by the Norwegian state, is to break new ground in the Euromarkets by launching a commercial paper programme without any back-up from its bankers.

According to Mr Georg Stormer, chief financial officer, this move will initially raise about \$100m, and mark a new stage in the process whereby international banks are squeezed out of the business of lending to top-ranking corporations.

Commercial paper programmes, which involve the sale of short-term paper to investors in the money market, are usually underwritten by banks or backed by medium-term lines of bank credit. But Norsk Hydro has decided to dispense with this support altogether.

"We borrow much cheaper than the banks. Our credit rating is better in general," Mr Stormer said.

In a complete reversal of the normal relationship between a company and its bankers, Mr Stormer added that initial proceeds from the programme will be lent to banks at a profit.

The company, which has not increased its net borrowing since 1978, has no substantial borrowing need at the moment, but wants to initiate an active commercial paper programme to help it meet working capital requirements as they arise.

Norsk Hydro has chosen Chase Manhattan and Merrill Lynch to act as dealers in the paper. These two houses will bid against each other for each issue and then place it with investors. But there is no limit either on the amount Norsk Hydro will raise in this way or on the life of the programme.

Mr Stormer said he believed the commercial paper would meet demand both from institutions and from retail investors in countries such as Switzerland, where there is keen interest in short-term dollar assets, especially those offered by non-banks.

Although its debt has not been rated by U.S. agencies, with net earnings last year of NKr 1.97bn (\$204.3m) on turnover of NKr 35.5bn, Norsk Hydro ranks with investors as one of Europe's premier corporations. Other top-rated corporations are expected soon to follow its example.

As they do so, bankers say they will have to concentrate on making trading profits from handling the paper rather than picking up underwriting fees and loan interest.

International credits, Page 19

UK pit strike to end

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tonnes capacity cut was announced) are still with us – only now they're worse." Markets in the domestic and steel sectors had been lost.

Mr Eaton's comments made it clear that the board will press ahead with pit closures. He said that the revised colliery review procedure agreed last October with the pit supervisor's union Nacods – incorporating an independent element – would be brought in by agreement with Nacods and the British Association of Colliery Management. If the NUM chose not to participate, it would be set up anyway.

He said that 61 faces had been lost with all their equipment, and that many pits would take at least three months to recover full production.

In South Wales, plans were being made last night for an "honourable return" behind bands and banners – but in the tiny, militant Kent coalfield, the area's 2,000 miners have been called to a meeting today to decide whether or not they will follow the national return.

Mr Scargill faced some angry barracking from the crowd of some 300 militant miners outside the TUC's London headquarters where the delegate conference was held – but he gave no sign of fearing his own position as president was insecure.

Egyptians in £600m Harrods stores bid

BY JOHN MOORE, CITY CORRESPONDENT, IN LONDON

THE AL-FAYED family of Egypt are poised to make a £600m offer for House of Fraser, the UK stores group that owns Harrods. Directors of Fraser were meeting yesterday to consider whether they could recommend an offer for the company.

The new twist in the affairs of the stores group has developed in the last week after the completion of a Monopolies and Mergers Commission report into Lonrho's own long running battle for control.

There is speculation that the Commission has changed its mind on key points raised in its last review of Lonrho's involvement in House of Fraser, which it produced in 1981, when it concluded that any bid by Lonrho for the stores group would be against the public interest. Speculation in London about the possibility that Lonrho might be free to bid for Fraser has prompted the Al-Fayed family to make renewed representations to the board to recommend to shareholders an offer that would be made by them.

The Al-Fayed family are represented on the Fraser board by the two brothers Mohamed and Ali. They came on to the Fraser scene last November when they bought the crucial 29.9 per cent block of shares from Mr Roland "Tiny" Rowland's Lonrho for £138.3m. After the sale Mr Rowland bought further shares in Fraser and now has a stake of 6.3 per cent.

An angry Mr Rowland said yesterday that the board of House of Fraser "cannot recommend any offer to shareholders until the Department of Trade and Industry reports on our position with House of Fraser. Fraser cannot recommend any offer until it knows what our intentions are. We may want to offer 425p to 450p if we gain clearance."

Mr Rowland argued that any recommended offer at this stage might be in breach of the undertakings to the Trade Department which required both sides to do nothing that would alter the position until the Monopolies and Mergers Commission had reported.

When the Al-Fayed family bought their shareholding last November they had sounded out the Fraser board on the possibility of making a full offer for the group which they hoped would be recommended. But the Fraser board indicated that it was much too early for conclusions to be reached and time would be needed for both sides to work together

In any deal proposed by the Al-Fayed family it is thought that Professor Roland Smith, the £50,000-a-year part-time chairman, would be offered a new contract by the Al-Fayeds to stay on with the group. At yesterday's meeting directors were understood to be reviewing closely the implications of recommending any offer at this stage and also the Al-Fayeds' intentions, as well as the possible outcome of the Monopolies and Mergers Commission report.

Rio bank writes off loans to shipping sector

By Andrew Whitley in Rio de Janeiro

A MASSIVE domestic financial scandal involving more than \$1bn of mainly government-guaranteed bank loans to the Brazilian shipbuilding industry, has forced a prominent investment bank to write off its entire loan portfolio for the sector.

Banco Bozano, Simonsen de Investimentos, in which foreign shareholders have a 46 per cent interest, announced last week that it had written off loans totalling Cr 122.5bn (\$30m).

Brazilian and foreign banks are being forced to take such action as a result of growing pessimism about a satisfactory outcome to the Sunamam scandal in the near future. Official inquiries into the former activities of Sunamam, the merchant marine authority dissolved in mid-1983, show few signs of an early resolution.

The Bozano, Simonsen loans were provided to Companhia Comercio e Navegacão (CCN) and Emaq-Engenharia a Maquinas SA, two of Brazil's leading shipbuilders.

Including bank interest and penalty payments, Bozano, Simonsen estimates that it was owed Cr 180bn as of the end of December (\$56m at the exchange rate then). After announcing the loan write-offs, the bank said it would ask its shareholders for a matching capital increase at a shareholders meeting later this month.

Foreign shareholders are Anglo American – the South African mining house – with 21 per cent, and Mellon Bank of the U.S., and the National Commercial Bank of Saudi Arabia, each with 12.5 per cent. The controlling interest is held by Sr Julio Bozano, the Brazilian financier.

The investment bank – proportionately the most heavily exposed of all the 43 banks involved in the Sunamam affair – is also taking court action against its debtors, which include the Transport Ministry as the government organisation responsible.

Bozano, Simonsen's lawsuit comes after two smaller court actions against CCN undertaken by Banco Inter-Atlantico – a small investment bank managed by Morgan Guaranty – and the Hongkong and Shanghai Banking Corporation.

Sr Paulo Ferraz, CCN's former president, committed suicide last month as pressures mounted from the shipyard's creditors and government investigations into the yards accounts.

Bozano, Simonsen's write-offs and capital increase call are the first such actions to be taken by any bank since the crisis erupted late last year.

Wrangling between the transport ministry, which is taking an obdurate line, and the finance ministry, anxious to clear up the matter as soon as possible, has been largely responsible for the delays in the Sunamam affair.

A government decree, which would have led to the federal treasury formally assuming all the Sunamam guaranteed debts, has been blocked by Sr Cloraldino Sovero, the Transport Minister. The shipbuilding scandal is now unlikely to be resolved before the end of the Figueiredo government, in two weeks time.

The only bank to have obtained any satisfaction has been Midland, which has a \$30m loan outstanding. After threatening not to participate in the forthcoming Brazilian debt re-scheduling package if the affair was not cleared up, Midland recently obtained a written guarantee from the finance ministry thet its debt would be honoured by the government.

Genscher bid to calm Moscow's 'star wars' fear

Continued from Page 1

ered Moscow's agreement to today's talks.

Herr Genscher's talks with the Polish leader will be aimed largely at agreeing new ground rules for an official visit to Warsaw. The West German Foreign Minister cancelled his visit to Poland at the last minute last November after Warsaw raised objections to his itinerary.

On Thursday, Herr Genscher travels to Bulgaria, a visit long planned. The effect of his week of shuttle diplomacy, however, and the visit to Bonn last week by Herr Axen, are likely to be read as a considerable boost to Bonn's Ostpolitik and to Herr Genscher's prestige, which has been somewhat overshadowed in recent months by Chancellor Kohl's own appetite for engaging in negotiations with foreign governments.

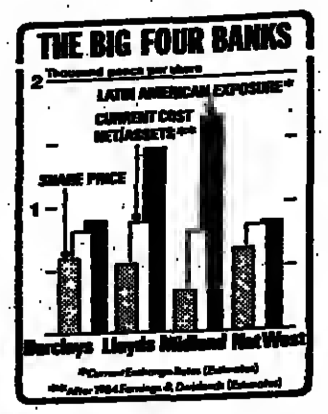
THE LEX COLUMN

Cleaning up at the clearers

It may seem strange, but this week's round of results from the London clearing banks is being awaited with something akin to optimism. Leaving the Midland's well-publicised difficulties to one side, the market seems to be looking for reported profits to have grown on average by as much as 20 per cent in 1984. Since the clearers' shares have joined in the general market rise over the past few months – standing about a third higher than they did at their low point last May – it might appear that investors are happier than they were with the quality, as well as the quantity, of the banks' earnings. Latin American debt might be no more than a memory.

The sort of estimates for bad debt provisions that have figured in recent City of London discussion of the 1984 results make it clear enough, however, that the entanglement with doubtful foreign borrowers is by no means over. Total provision against problem loans (and missing interest payments) may have risen by almost 50 per cent, to more than £1bn. A lot of this increase must be due to the higher sterling value of the dollar assets in foreign loan books, and to Crocker. There may be some attempt to put right the under-provisions of previous years. Even so, the banks themselves probably recognise that there is still a backlog of reserving to be done.

THE BIG FOUR BANKS



*Current Exchange Rates (Estimated)
**After 1984 Earnings & Dividends (Estimated)

Instability

The economic news coming out of the most important debtor countries has, it is true, been more encouraging over the past year than most people expected. Helped by the U.S. recovery and the galloping tendency to import caused by the strength of the dollar, the major Latin American debtors have actually managed to generate trade surpluses large enough to build up their foreign exchange reserves. Indeed, they have enjoyed a period of export-led growth, rather than the earlier pattern of forced exports and total domestic austerity.

If the U.S. does fall back, however, this ideal process may break down rather rapidly. In any case, for the miracle to be prolonged, it would need sustained growth of exports – and since about 85 per cent of these currently go to the U.S. that is none too likely. Moreover, the improved external balances have not been achieved without internal costs, mainly in the form of exponential inflation; the resulting threat of political instability may itself put the whole financial reconstruction in jeopardy. A falling oil price could strain the system even further.

While the danger of a Latin explosion may not be critical, bankers cannot afford to ignore it. But the prices of bank shares alone suggest that the market is more sceptical than the banks are prepared to be – at least in public. An average price-earnings multiple of about six, half that placed on the rest of the market, shows what the market thinks about the quality of bank profits; share prices are not discounting earnings growth at 20 per cent very far into the future.

Similar morals can be drawn when it comes to assets. Discounts for the clearing banks are traditionally large, but for Lloyds to be trading almost 40 per cent below its likely net asset value is exceptional. Midland's discount of practically 60 per cent verges on the pathological; since Crocker's entrails have been on view quarterly, with regular accidents in between, the market has had every encouragement to write down Midland's transatlantic assets to the lowest conceivable value. If it were possible to disregard Crocker – including the minority which Midland is buying out – the discount would almost halve. It is unfortunate that Crocker, and the risk it adds to the rest of Midland, cannot simply be subtracted.

The stock market is saying, though the banks may disagree, that the clearers have limited their level of bad debt provisions to what they think they can afford – and their auditors will let them get away with; they have fought shy of writing down anything approaching the true risk of their loans. On this view, what the banks can afford to provide is determined by what profits they want to report and what dividends they feel they need to pay. The question then is whether shareholders really believe or demand 20 per cent growth in profits from institutions which are so evidently mature, faced by increasing competition in their back yard, and stretched by their Third World lending.

Recapitalisation

There are things that the banks could do to improve the realism of their reported earnings and balance sheets. If it is true that National Westminster, currently by far the best capitalised London clearer following last year's rights issue, plans to make more of its sovereign provisions specific – so that they come off its capital base as well as its profits – that is to be welcomed by investors.

The fact that it is advantageous for a well-capitalised bank to make its provisions specific rather than general, since the provisions then reduce the amount of profit liable for tax, will not detract from the perceived improvement. What would really make a difference, though, is a plausible increase in the total amount provided – whether specific or general.

Chary as the banks may be of going down this road, it may not be as rocky as they think. The old argument that the money saved by reducing tha payout ratio would only be lost elsewhere – because confidence falls along with the dividend – still seems to paralyse them. But shareholders have already shown that they are more sophisticated, since for Midland at least the share price has persistently discounted a cut in dividend which would be rational enough given the lack of cover.

Of course, the banks' capital base cannot be rebuilt from the absence of dividend growth alone, the job needs to be done more rapidly. Banks are only too aware that equity is expensive to such lowly rated companies, but since the Bank of England has circumscribed the usefulness of perpetual debt, the choice lies between rights issues and asset sales. For Midland, it may have to be both.

World Weather

		°C	°F
Ajaccio	F	14	57
Akrotiri	F	13	55
Algiers	S	18	64
Amsterdam	C	8	46
Athens	C	11	52
Bahrain	C	18	64
Bangkok	S	36	97
Barcelona	F	17	63
Beirut	S	11	52
Belgrade	C	6	43
Berlin	S	5	41
Biarritz	–	–	–
Blackpool	S	6	43
Bordeaux	S	14	57
Brussels	S	9	48
Budapest	–	–	–
B. Aires	S	30	86
Cairo	F	17	63
Cape Town	C	18	64
Caracas	C	26	79
Casablanca	S	16	61
Copenhagen	C	0	32
Corfu	R	11	52
Dublin	S	9	48
Dubrovnik	C	8	45
Faro	S	16	61
Florence	F	6	43
Frankfurt	C	7	45
Funchal	F	18	67
Geneva	C	6	43
Gibraltar	S	16	61
Guernsey	S	9	48
Helsinki	Sn	–4	25
H. Kong	S	16	61
Innsbruck	F	6	43
Inverness	F	9	48
Istanbul	S	7	45
Jersey	S	8	46
Jo'burg	S	23	73
Las Palmas	F	21	70
Lima	F	14	57
Lisbon	S	16	61
Locarno	S	11	52
London	R	10	50
Los Angeles	S	9	48
Luxembourg	C	4	39
Madrid	F	11	52
Majorca	S	16	61
Malaga	S	18	64
Malta	F	16	59
Manila	S	36	97
Miami	S	28	82
Milan	S	11	52
Moscow	S	–1	28
Munich	F	6	43
Nairobi	F	27	81
Naples	C	11	52
New Delhi	S	28	82
New York	S	16	61
Nice	S	14	57
Oporto	S	11	52
Oslo	C	–5	23
Paris	C	11	52
Prague	C	2	36
Reykjavik	C	1	34
Rio de J'o	C	31	88
Rome	S	15	59
Salzburg	C	4	39
Seoul	S	7	45
Singapore	F	29	84
Stockholm	C	0	32
Strasbourg	S	10	50
Sydney	C	24	75
Taipei	C	20	68
Tangier	S	15	59
Tehran	–	–	–
Tel Aviv	S	15	59
Tenerife	–	–	–
Tokyo	F	13	55
Toronto	S	–8	18
Tunis	S	17	63
Valencia	S	20	68
Venice	C	12	54
Vienna	C	1	34
Warsaw	C	4	39
Zurich	C	5	41

Readings at mid-day yesterday.

C–Cloudy D–Drizzle F–Fair Fg–Fog R–Rain S–Sun Sl–Sleet Sn–Snow T–Thunder

Israeli IMF concern

Continued from Page 1

ny Framatome, was due in Tel Aviv last night to continue discussions on the sale of two 900 MW nuclear power plants to Israel. The French team will also visit the proposed site for the new power station.

● Israel began the second stage of its military withdrawal from Lebanon yesterday following cabinet approval of the immediate implementation of the second phase of the three stage pull-back.

The cabinet decision comes two weeks after the evaluation of the Sidon region. The final withdrawal to the international border, ending the occupation which began with the invasion of June 1982, is expected to be completed in the summer.

Transporting heavy equipment southward from the Bekaa Valley and dismantling the intelligence gathering listening posts high up on the Baruk mountain range is expected to take eight to 12 weeks to complete.

The cabinet did not set a deadline for this stage, leaving it to the army to judge the right moment to withdraw from the front where the bulk of Israel's forces in Lebanon are bunkered down, often less than 100 yards away from the Syrien forces.

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SECTION II – COMPANIES AND MARKETS
FINANCIAL TIMES
Monday March 4 1985

CREDITS

European banks join $500m facility for Sears Roebuck

BY PETER MONTAGNON, EUROMARKET CORRESPONDENT, IN LONDON

SEARS ROEBUCK, the U.S. retailing and financial services concern, has set out to broaden its banking relationships with a new $500m, five-year revolving underwriting facility.

Sears has mandated the facility to its Dean Witter Capital Markets International unit which has sought to steer the deal away from traditional banking lenders in the U.S. and Japan. As a result a mostly European group of banks has joined the deal which bears an unpublicised but "very aggressive" commitment fee.

These banks include some that are rarely if ever, seen in the Euronote market including, for example, Girozentrale of Vienna and three major Italian banks, Banca Commerciale Italiana, Banco di Roma and Banca Nazionale del Lavoro.

The Sears deal was one of the relatively few in a Euronote and credit market that was again becoming dominated by corporate names last week as few new sovereign borrowers appeared.

S. G. Warburg is arranging a £100m, five-year bankers acceptance facility for Northwest Securities, the finance company subsidiary of Bank of Scotland. The deal bears a facility fee of ⅛ per cent and the acceptances will be sold at a maximum commission of ⅜.

A feature of this deal is that the acceptance sales are to be handled through a tender panel of bidders, a structure that first appeared in the sterling acceptance market last December with a £15m deal for Rhône Poulenc, the French chemical company. Bankers say the tender panel structure is now becoming increasingly common for acceptance deals in the sterling market.

Elsewhere the Ecu 50m credit for the Soviet Foreign Trade Bank led by Crédit Commercial de France has as expected been doubled to Ecu 100m. U.S. bankers have not joined the deal which bears a split margin of ¼-⅜ per cent, but one rather unusual lender is the Bank of China which has come in as a manager.

Samuel Montagu is arranging a $35m four-year transferable credit for Storebrand, the Norwegian insurance concern. Though small this deal contains an innovative feature. In keeping with its transferable nature the yield declines as it approaches maturity. Known as cascade pricing this gives a margin of 12.5 basis points in the first year falling in equal progressive stages to 5 points in the fourth year.

In rescheduling news, signing of the Philippines' $925m credit remains delayed by the failure of one large lender, National Commercial Bank of Saudi Arabia, to contribute. Reports from Manila that this problem had been resolved proved unfounded and talks were continuing at the weekend.

EUROMARKET TURNOVER
Turnover ($m)

	Straights	Conv	FRN	Other
Primary Market				
U.S.$	2740.9	123.3	258.3	724.5
Prev	5960.8	35.3	3180.8	162.3
Other	364.9	–	–	36.6
Prev	1804.4	–	–	0.7
Secondary Market				
U.S.$	12079.1	630.9	9741.1	1787.4
Prev	18224.6	1427.7	7988.4	1646.3
Other	2141.8	18.3	239.7	999.9
Prev	3161.8	43.0	257.4	943.2

	Cedel	Euroclear	Total
U.S.$	10832.9	17252.7	28085.6
Prev	11823.2	27803.0	39626.2
Other	2312.8	1488.5	3801.3
Prev	3337.8	2872.8	6210.6

Week to Feb 28 '85 — Source: AIBD

INTERNATIONAL BONDS

Nervous investors turn attention to convertibles

BY MAGGIE URRY IN LONDON

THE DOLLAR'S temporary fall last week concentrated minds in the Eurobond market on what will happen when the currency stops rising.

With interest rates edging up as well the fixed rate Eurodollar bond market was again not a happy place, with prices down around 2 points over the week.

Instead attention is moving to convertible issues. The flow of Japanese companies bringing such deals continues. Investors in these usually get a low coupon, but the conversion premium is also low and with the stock market firm it does not take long to make up the gap. Also with these the dollar/yen exchange rate is fixed when the deal is priced, so there is the chance of a currency gain as well.

U.S. corporates have been a little shyer of making convertible issues lately, and some dealers report pent up demand among institutional investors for such paper. Generally they offer higher yields than the companies' shares, while giving the equity play as well.

On Friday Credit Suisse First Boston brought two U.S. borrowers to the Eurobond market – Louisiana Land and Exploration, and Newmont Mining. The first had been carefully syndicated with CSFB and Morgan Stanley dividing Europe up between them. CSFB was to place two thirds of the deal in Switzerland, Morgan Stanley the rest elsewhere.

With a lot of work done before the launch and generous looking terms, a 9 per cent coupon and a 13 per cent premium, the bonds were offered at par almost from the time the deal left the launch-pad.

Newmont's terms looked rather tighter, at an indicated 8¼ to 8½ per cent coupon and a 17 to 20 per cent conversion premium. Moreover the conversion is into Du Pont shares – Newmont ended up holding Du Pont shares when that company took over Conoco, in which Newmont had a stake.

The deal was at an earlier stage in the syndication process than Louisiana, though CSFB was rumoured to have had refusals from some houses invited in as co-leads. There was no trading in the issue.

Another strategy for investors nervous about the dollar is to buy warrants, and some buying of these was seen last week by dealers such as Société Générale Strauss Turnbull. A small investment locks into current dollar yields and the rest of the money can be switched out of dollar bonds elsewhere. The same effect can be achieved by buying partly-paid issues – though these have gained a bad reputation in the market, often launched just before a market fall.

Continental investors and some Japanese buyers have been turning their attention to the Eurosterling market, as a high coupon alternative to dollar bonds. They certainly had plenty of choice of new issues with six being launched last week. A good range of credits and maturities was served up.

All were able to borrow at a cost less than, and sometimes substantially less than, UK government bond yields. Eurosterling bond yields have fallen well below gilt yields in recent weeks, as buyers who prefer Euro-style bonds have increased their purchases. The new Inland Revenue rules on "bond-washing" will not affect them.

The number of issues, however, and there seem to be more in the pipeline, was weighing on the market. All agree that investors are the "small-ticket" retail buyers and it usually takes a couple of weeks and some patience to place the paper. Even so most of the deals had weakened by the weekend, and co-managers are unwilling to add to their underwriting commitments.

The Euro-Australian dollar market was, relatively speaking, a hive of activity also, with two issues launched. Here too the market is small, and the second issue – for Statewide, the Australian property group – was moving slowly.

The Swiss franc foreign bond market has not had much joy from the dollar's moves. Over the week prices fell on average by ½ point, with turnover low. New issues are now coming with 8 per cent coupons or more and Chrysler's 6¼ per cent pricing on Friday met an appreciative response.

Pepsico's deal, priced on February 1 with a 5¼ per cent coupon, suffered the fall in the market since, and started trading on Friday at 97¼, picking up to 97½ by the close compared to the par issue price. At that level though the bonds yield 5.58 per cent, reflecting the Swiss affection for household names.

Honda started a trend when it launched a warrant issue in D-Marks. Four more equity-linked deals followed – they are not ruled out by the new issue ban agreed among the West German banks three weeks ago. The next capital markets sub-committee meeting is set for Wednesday and a small calendar may be drawn up then. Coupons will probably be higher.

The market recovered by around ½ point over the week, cheered by the Bundesbank's intervention in the foreign exchange market.

● The Kingdom of Denmark is planning a European Currency Unit bond issue, for Ecu 100m, on the Copenhagen market, in the spring. Danish nationals will be able to buy the bonds, which will not be in bearer form. The Ministry of Finance hopes that "this issue will contribute to promoting a more general use of the Ecu in international transactions."

NEW INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
Onoda Cement ¶‡	35	1988	5	8	100	Nikko Secs (Europe)	8.000
Chubu Elec. Power ‡	80	1992	7	10⅜	100½	Daiwa Europe	10.521
Japan Dev. Bank ‡	50	1992	7	10⅝	100	Bank of Tokyo Int.	10.625
Swedish Export Cr. †‡	150	1990	5	(b)	100	Merrill Lynch	–
EIB †‡	200	1993	8	(a)	100	Orion Royal Bank	–
Kajima Corp. §	40	2000	15	3⅞	100	Morgan Stanley	3.875
Citizen Watch §	50	2000	15	(3)	100	Nikko Secs (Europe)	•
Louisiana Land §‡	100	2000	15	9¼	100	CSFB	9.250
Newmont Mining §	60	2010	•	(8¼–8½)	100	CSFB	•
AUSTRALIAN DOLLARS							
AIDC ‡	30	1988	3	13	100	Orion Royal Bank	13.000
Statewide ‡	30	1988	3	13⅛	100	Banque Indosuez	13.125
D-MARKS							
Honda Motor ¶‡	200	1990	5	3⅜	100	Deutsche Bank	3.375
Zenchiku Co. ¶	35	1990	5	(3⅞)	100	Bayerische Vereinsbank	•
Tsubakimoto Prec. §	60	1990	5	(3⅛)	100	Commerzbank	•
Tosi Co. ¶	50	1990	5	(3⅞)	100	BHF-Bank	•
Toyobo Co. ¶	60	1990	5	(3¾)	100	Deutsche Bank	•
SWISS FRANCS							
Dennison Mfg. ¶‡	100	1997	–	5⅛	100	First Chicago	5.125
Tsubakimoto Prec. **§	50	1990	–	(1⅞)	100	UBS	•
Nissin Electric **§	50	1990	–	(2)	100	Crédit Suisse	•
World Bank	150 min.	1995	–	(6)	•	UBS	•
Nat. Australia Bk ‡	100	1993	–	6	100¼	Crédit Suisse	5.960
Toyo Comm. Equip. **§	50	1990	–	(1⅞)	•	Banca della Sviz. Ital.	•
First Boston **‡	72.5	1992	–	6⅛	100	Crédit Suisse	6.125
Kurabo Ind. **§	70	1990	–	(2)	100	Crédit Suisse	•
Iseki Co. **§	50	1990	–	(2)	100	UBS	•
Chrysler Fin. Corp. ‡	150	1993	–	6¼	100	SBC	6.250
Instrum Valmu Oy	80	1995	–	(6)	•	Crédit Suisse	•
STERLING							
Amex O/S Credit ‡	30	1992	7	11⅜	100	Morgan Grenfell	11.375
EIB ‡	50	1993	6.7	11⅛	99¾	Samuel Montagu	11.174
Royal Trust Co. ‡	30	1990	5	11⅜	100	S.G. Warburg	11.375
GMAC ‡	40	1990	5	11	100	Hambros Bank	11.000
Sweden (c)‡	60	1995	10	11¼	99⅝	S.G. Warburg	11.358
PIBA ‡	35	1994	9	11⅝	100	Citicorp Int.	11.625
GUILDERS							
Honda Motor ¶‡	100	1990	5	3⅞	100	AmRo	3.875
Sweden ‡	200	1995	8	8½	100	AmRo	8.500

* Not yet priced. ‡ Final terms. ** Private placement. § Convertible. † Floating rate note. ¶ With equity warrants. (a) Equal to 3m Libor. (b) 70 basis points over 6m US T-Bills on a money market equivalent basis, refixed monthly, payable six-monthly. (c) Additional £40m tap.
Note: Yields are calculated on AIBD basis.

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INTERNATIONAL CAPITAL MARKETS

U.S. MONEY AND CREDIT

Dramatic reversal in market psychology

U.S. BOND market psychology has undergone a dramatic reversal over the past few weeks. Emphasising this, bond prices fell again last week as short-term interest rates soared and concerns mounted about future Federal Reserve Board firming moves.

The market's nervousness was heightened by the short-lived *dollar* decline in the wake of massive European central bank intervention in mid-week.

The *dollar's* decline produced a double shock to the credit markets. First it prompted fears — and *some limited* reports — of a wave of foreign sellin. Second, the markets feared it might allow the Fed to firm sooner rather than later in response to the recent rapid rebound in monetary growth and accelerated pace of the economy highlighted by the 1.7 per cent advance in January leading economic indicators announced on Friday.

Most Wall Street economists believe the Fed has already begun to *show its hand* by "tugging at the reins."

Dr Henry Kaufman of Salomon Brothers notes in his latest Comments on Credit: "The Federal Reserve's gentle tugging at the credit reins since late January has raised interest rates—in some cases significantly—in most sectors of the bond markets, but as yet there *has* been no *slowing* in *money* growth. Although the Federal funds rate has only inched higher since the Fed began providing reserves more cautiously, market psychology has reversed completely."

The $1.7bn increase in M1 reported last week leaves the basic money supply measure well outside the target "cone rangs," although as Mr Volcker has emphasised in his recent *Congressional testimony*, it *is* still just within the alternative parallel lines depicting the growth ranges (shown in the accompanying charts).

So far however the February figures show M1 bounding along at a 12 per cent annual clip compared with the Fed's liberalised top-end target of 7 per cent.

There is mounting evidence of the more "cautious" approach being taken by the Fed to providing reserves. This modest shift is apparent in the growth of bank borrowings at the discount window which grew to an average of $569m during the latest statement period, compared to $382m in the preceding two maintenance periods.

The increase in bank discount *window* borrowings has lifted the Fed funds rate from a recent low of around 8.5 per cent to an average of about 8.5 per cent. Although the Fed signalled a protest to an 8⅞ funds rate on Friday, the fact that customer repurchase agreements rather than a system repurchase agreement was used to add reserves confirmed market *suspicions* of a *slightly* firmer Fed stance. Some economists like Dr Kaufman are already predicting a 9 per cent funds rate by the end of the month.

In the meantime other money market rates have risen 50 to 100 basis points *since January*.

Last week short-term rates continued to rise gaining between *5 and 50 basis points*, leading to a further flattening of the yield curve and the growing possibility of a prime rate hike.

In the Treasury bond market it is not difficult to find evidence of the shift in sentiment *either. Dealers' books are still* awash with unsold paper

Paul Taylor

U.S. MONEY MARKET RATES (%)

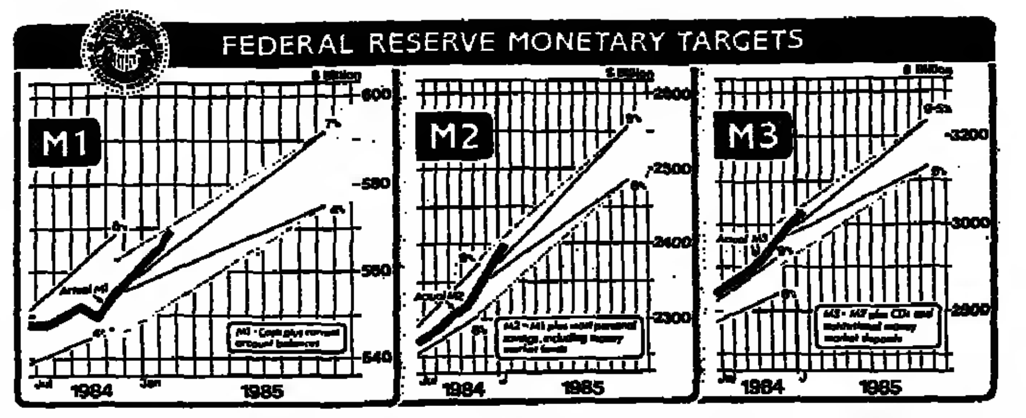
	Last Friday	1 week ago	4 wks ago	12-month High	12-month Low
Fed Funds (weekly average)	8.42	8.60	8.64	11.77	7.82
Three-month Treasury bills	9.65	8.39	8.20	10.77	7.58
Six-month Treasury bills	8.82	8.53	8.32	10.83	7.87
Three-month prime CDs	9.00	8.85	8.55	11.90	8.05
30-day Commercial Paper	8.65	8.60	8.40	11.38	7.85
90-day Commercial Paper	8.90	8.70	8.40	11.40	7.00

U.S. BOND PRICES AND YIELDS (%)

	Last Friday	Change on week	Yield	1 week ago	4 wks ago
Seven-year Treasury	99¾	−⅝	11.81	11.70	11.25
20-year Treasury	96⅞	−⅝	12.03	11.97	11.47
30-year Treasury	95½	−⅝	11.80	11.70	(new)
New 10-year "A" Financial	N/A	−⅝	12.40	12.38	11.90
New "AA" Long utility	N/A	—	13.00	13.00	12.35
New "AA" Long industrial	N/A	—	12.75	12.75	12.12

Source: Salomon Bros (estimates).

Money Supply: In the week ended February 18 M1 rose by $1.7bn to $568.3bn.



UK GILTS

Index-linked stocks perform well

THE GILT-EDGED market has got used to surprises in recent months, but last week's dramatic events on the foreign exchange markets and the Government's pre-Budget swoop on "bond-washing" nonetheless came as a considerable shock.

The net effect though was to leave the market slightly better off, with yields on conventional stocks edging down fractionally and index-linked stocks turning in another strong performance.

To take the currency markets first. On Monday pound-dollar parity looked just a day or so away and gilt-edged stocks were sinking alongside sterling.

By Wednesday, however, Mr Paul Volcker's warnings on the dollar had persuaded European central banks to show their mettle, and foreign exchange dealers were reminded that the U.S. currency could occasionally fall.

For the first time in recent memory, gilts could rise on sterling's coat-tails. But if the dollar raid was dramatic—and the central banks gave a further *demonstration* of their resolve on Friday—doubts were soon creeping back in as to whether the U.S. currency had suffered anything more than a temporary reversal.

The judgment of many was that if over $3bn of central bank intervention could do nothing more than leave the dollar where it was a week earlier, then it will soon be beading upwards again.

The test may come this week—and it should be said that the Bundesbank has been making threatening noises. But with oil worries beginning to creep back into the markets, the view of most brokers is that the risks for sterling and gilts are still weighted towards the downside.

The confidence of gilt-edged traders meanwhile was not helped by the Inland Revenue's decision to recoup the £300m it reckons to have been losing through bond-washing, which has allowed gilt holders to minimise tax liability by converting accrued dividend *income into* capital gains.

The immediate reaction was to mark down the high-coupon issues which net funds and individuals have stripped of dividends by passing the accrued interest on to the discount houses and pension funds.

Conversely low coupon stocks, where a much bigger proportion of earnings comes in the form of a capital gain, were given a boost, with the biggest rises coming on index-linked stocks which in effect have ultra-low coupons.

But the implications of the move may not be confined to relative prices in different sectors of the market, which have now more or less adjusted. As *an analysis* by broker James Capel points out, the market as a whole will now be more heavily taxed, suggesting a higher yield level will be necessary to maintain the relative attraction of gilts to other investments.

There could also be a quite significant impact on turnover. Initial estimates from some of *the large brokers last week* suggest that up to 25 per cent of turnover may have been linked directly or indirectly to bond-washing.

In particular, as Robert Thomas of Greenwell points out, turnover in some of the older stocks was almost entirely a reflection of dividend stripping, and the danger must be that some of these will become virtually unmarketable.

The *move also encouraged* some to go for the higher yields offered by bulldog bonds, with the yield margin between gilts and bulldogs falling from £1.2 to £1 after the announcement.

The calculation of the authorities, however, is probably that since the new rules do not come *into full effect until March* 1986, lost turnover will be fairly speedily made up with the establishment of the new gilts market. There may also be some compensation in the form of a wider and deeper market in *index-linked stocks*.

The Bank of England's decision on Friday to issue two £150m tranches of existing index-linked stocks—the 2½ per cent Treasury 2009 and the 2½ per cent Treasury 2016—underlined their additional attraction after the tax decision.

The expectation is that index-*linked stocks*—along with conventional low coupon stocks, will play a much greater role in the Government's funding operations.

There must be some doubts, however, over just how far the yields on index-linked stocks can fall. Since the beginning of the year real yields have dropped from 3.4 per cent to 3.1 per cent on present inflation rates.

On that basis *inflation* would have to rise to 7 per cent or more for index-linked stocks to outperform conventional stocks an eventuality few are yet predicting despite sterling's recent slide.

Philip Stephens

GILT-EDGED YIELDS (FTA INDICES)
March 1

	Low coupon	Medium coupon	High coupon
5-year	10.95 (11.27)	11.97 (12.12)	12.09 (12.02)
15-year	10.79 (10.94)	11.26 (11.37)	11.49 (11.56)
25-year	10.32 (10.44)	10.70 (10.79)	10.86 (10.89)

Index-linked stocks at 5 per cent inflation rate —3.14 (3.31).
Yields for February 22 in brackets.

FT/AIBD INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Price	Chg. on week	Yield
AHFC O/S Fin 11¾ 94	100	97½	−1¼	12.22
Amer Saving 12 88	125	98¼	−0¼	12.00
Amer Saving 12¼ 89	100	100¼	−0¼	12.08
Asian Dev Bk 11¾ 93	100	96⅞	−2⅜	12.33
Australia 11¼ 90	100	99½	−2⅝	11.34
Australia 11¾ 95	300	98⅝	−2¼	12.05
Australia 11¾ 98	100	99¼	−2⅞	11.73
AIOC 11 88	75	98¼	−1¼	11.57
Austria 15½ 88	75	108¼	−0¼	11.89
Bk America 12 87	250	100½	−1	11.68
Bk Nova Scotia 13¼ 87	100	102¼	+0⅛	12.13
Bank of Tokyo 13¼ 91	100	104¼	−1¼	12.48
Bank of Tokyo 13⅞ 89	100	104⅞	−2⅛	12.53
Bqe Nat Paris 13½ 98	150	103⅞	−1¼	12.29
Bqe Nat Paris 14¼ 90	250	104½	−1⅞	12.97
BFCE 16 88	250	106¼	−0¼	11.30
Br Col Hydro 11¾ 93	200	98½	−2⅛	12.01
Br Col Hydro 12½ 14	200	98⅞	−2⅛	13.04
Br Col Hydro 12½ 13	250	98⅞	−3⅛	13.05
Britoil Fin 11¾ 90	125	98	−0⅛	12.09
Canada 10⅞ 88	500	99¼	−0⅛	10.92
Casio Computer 5⅞ 89	80	118	+2⅛	1.27
CCCE 12½ 95	75	99⅞	−1¼	12.91
Citicorp O/S 10 86	300	98¼	−0⅛	11.28
Citicorp O/S 10⅛ 90	100	92½	−1⅞	12.39
Citicorp O/S 11¾ 89	100	97⅞	−1¼	12.28
Citicorp 11⅜ 90	100	97¼	−1¼	12.29
Citicorp O/S 12 87	200	100½	−0¼	11.70
Citicorp O/S 14 94	100	101⅛	0	13.87
CNCA 13¼ 91	100	103½	−1¼	12.41
Coastled Int 12⅝ 88	125	101⅛	−0⅛	11.52
Camp Bancaire 13⅞ 90	75	103⅞	−1⅛	12.78
Comset 12¼ 91	100	100¼	0	12.17
Creditanstalt 13½ 91	100	101¼	−2⅛	12.67
Daiichi Kangyo 12⅜ 90	100	99	−1¼	12.46
Dart & Kraft 7⅜ 86	85	96¼	−0⅛	8.14
Denmark 11¾ 90	100	97¼	−1¼	12.36
Denmark 12¾ 92	250	99¼	−0¼	12.80
Denmark 13 92	100	100¼	−1	12.82
Denmark 13¾ 91	100	101⅞	−1¼	12.77
Denmark 13⅞ 88	100	104½	−1	12.13
Denmark 14 91	100	105¼	−0⅛	12.59
Du Pont Canada 13¾ 91	98	103¼	−0⅛	12.56
Digital Equip 11¾ 89	150	100¼	−0⅛	11.66
Dutch St Mines 11¾ 91	160	95¼	−1¼	12.44
Ekaportfinans 11¾ 90	100	98½	−1¼	12.36
Elec de France 9¾ 86	100	98⅜	−0⅛	10.94
Elec de France 10 88	125	96½	−1¼	11.66
Elec de France 11¼ 93	100	94	−1⅞	12.31
Elec de France 11¾ 90	100	98¼	−1¼	12.27
Elec de France 12⅛ 87	150	102¼	−0⅞	11.48
EEC 10⅛ 95	75	89	−2⅞	12.74
EEC 11 87	350	98⅞	−0⅞	11.50
EEC 11 95	75	94	−1¼	12.03
EEC 12 93	100	98⅛	−2¼	12.28
EEC 12 93	50	96¼	−3	12.61
Euro Inv Bk 11¾ 90	200	96¼	−2⅛	12.29
Euro Inv Bk 11¾ 91	73	97	−0½	12.36
Euro Inv Bk 11¾ 93	150	96½	−3	12.45
Euro Inv Bk 12½ 90	100	100½	−2⅛	12.27
EDC 9½ 86	150	99¼	−0⅛	10.54
EDC 9⅞ 88	200	96¼	−0¼	11.40
EDC 10 88	125	96¼	−0⅞	11.53
EDC 10¾ 88	100	98½	−1¼	11.63
EDC 11¼ 89	150	98¼	−1¼	11.88
EDC 11¾ 87	100	100¼	−1	11.51
EDC 12 88	100	99¼	−1¼	12.07
EDC 12¼ 87	100	100¼	−0¼	12.34
EDC 13¼ 87	100	103⅞	−0⅞	11.36
Export & Import 13¼ 91	75	105	−1¼	12.04
Farm Cred Cpn 11¾ 93	75	98¼	−2	11.91
Finland 9½ 88	100	98½	−0⅛	10.82
Finland 11½ 88	100	99¼	−1	11.86
Finland 15¼ 87	75	106⅞	0	11.32
Finnish Export 12¾ 87	75	101¼	−1¼	11.87
Firstfed Mich 1 13½ 89	125	102⅞	−0⅛	12.30
Florida Fed 12⅞ 89	100	101¼	−0⅞	11.79
G. E. Credit 96	600	25	−1	12.98
General Elec 9¾ 91	100	91⅛	−2⅛	11.68
Gen Elec Cred 11 91	200	98¼	−1¼	11.29
Gen Motors Ac 11¾ 90	100	98⅞	−1⅞	11.89
Gen Motors Ac 12⅜ 89	200	101	−0⅛	11.36
Gen Motors Ac 13 86	200	101⅞	−0⅛	11.27
GZB 14 91	100	104¼	−0⅞	12.84
Giro Vienna 13⅜ 91	75	101¼	−2½	12.85
GTE Finance 12 96	75	98¼	−1¼	12.11
Gulf Oil 10⅛ 94	100	91¼	−2⅛	11.76
Gulf Oil 12¼ 87	100	101¼	−0⅛	11.64
Holl Air Fin 12⅜ 91	100	99¼	−0⅞	12.37
IBM Credit 13⅞ 87	100	102¼	−0¼	13.10
IBM 12⅛ 92	200	103¼	−1¼	11.53
IC Industries 11⅞ 98	75	97¼	−1¼	12.20
Ind Bk Japan 11¾ 89	125	97⅞	−1¼	12.20
Ind Bk Japan 11⅞ 91	100	97⅞	−1¼	12.33
Ind Bk Japan 13⅞ 91	125	105⅞	−1⅞	12.49
IADB 12¾ 93	120	102	+1¼	12.09
Int Bk Rc Dv 11¾ 90	200	96⅛	−1⅞	12.20
Int Bk Rc Dv 12 93	200	98½	−2⅛	12.33
Int Paper 12 91	75	99¼	−1¼	12.05
Int Stand Elec 87	112	21¼	−0¼	13.57
Int Stand Elec 12 98	78	96¼	−1¼	12.56
ITT 11¾ 89	125	99¼	−1¼	11.64
Japan Airlines 12½ 94	70	104¼	−1¼	11.61
Japan Dev Bk 11¾ 91	100	102¼	+0⅛	11.55
Kyowa Fin HK 12⅞ 90	100	100⅞	−1¼	12.60
Long Term Cred 10⅛ 90	100	93¼	−2⅛	12.55
Long Term Cred 11 90	100	95⅞	−1¼	12.35
Long Term Cred 11¾ 89	100	98¼	−1¼	12.43
Long Term Cred 12 93	100	96¼	−1¼	12.43
Long Term Cred 12¾ 90	86	100¼	−2	11.95
Macy R. H. 11¾ 91	100	101¼	−2⅛	12.10
McDonalds Fin 11¾ 94	75	98¼	−2⅛	12.17
Minebea 6⅜ 89	100	97¼	−2	12.06
Mitsubishi 5 89	100	112¼	+0⅞	2.62
Mitsubishi Co 12½ 91	100	93¼	−0⅞	7.73
Mitsub Gas Ch 6⅞ 89	50	102½	−1¼	11.57
Mitsui Eng 7¼ 88	50	92	−2⅛	8.32
Mitsui Tst Fin 12 91	100	90¼	+0⅛	10.40
Montreal Urban 12 90	75	97⅞	−1¼	12.52
Mgn Guarnty 12⅛ 88	150	98¼	−1¼	12.80
Mount Isa Fin 13⅜ 87	100	99¼	−1¼	12.30
Ned Gasunie 11¾ 90	75	103¼	−0⅛	12.00
Ned Gasunie 11¾ 91	75	97¼	−1	11.75
Newfoundland 13 91	75	97¼	−0⅛	11.70
Nippon Crd Bk 13⅞ 88	100	102½	−1¼	12.37
Nippon Tel Tel 11¾ 90	100	103⅞	−0⅛	12.61
Nippon Tel Tel 13[illegible] 94	160	98¼	−1	11.47
Nissho-Iwai 8½ 89	70	109⅞	+6⅛	11.48
Nomura 6⅜ 88	100	87¼	−1¼	10.02
Nordic Inv Bk 11¾ 90	75	128⅞	+13¼	−1.35
Nova Scotia 11¾ 91	100	97¼	−1¼	12.38
Nova Scotia 11¾ 98	100	96⅞	−1¼	12.01
Oester Post 12¾ 86	75	98¼	−2⅛	12.02
Ohbayashi-Gumi 7¼ 89	60	99¼	−1¼	12.47
Ontario Hydro 11¾ 94	200	119½	−1	2.98
Ontario Hydro 11¾ 90	200	98¼	−1⅞	11.95
Ontario 12½ 94	250	99¼	−1¼	11.77
Pacific Gas & El 12 91	75	103½	−0⅛	12.21
Penney J. C. 11⅞ 90	100	98¼	−3¼	12.28
Penney J. C. 12⅜ 91	100	98¼	−1¼	12.15
Philips Petrol 14 89	200	101¼	−1¼	12.33
Post-Och Kred 12 90	75	103¼	−0⅛	12.94
Post-Och Kred 13½ 87	60	97½	−1¼	12.00
Prudential Ins 12¾ 87	150	103	−0⅛	11.91
Quebec Prov 12¾ 93	100	102¼	−0⅞	11.40
Quebec Prov 12¾ 94	160	98¼	−1¼	12.77
Quebec Prov 13 13	100	99⅛	−2⅛	12.33
RTZ 11¾ 93	100	98¼	−4¼	13.47
Royal Bk Scot 11⅞ 93	75	95¼	−1¼	12.50
Rural Bk Aust 12 91	80	98	−1⅛	12.63
Sanwa Intl Fin 12⅜ 90	80	99⅞	−0⅛	12.02
Saskatchewan 10⅞ 90	125	99	−1¼	12.59
Saskatchewan 11¾ 89	100	95	−1¼	12.13
Saskatchewan 15 92	150	98½	−1¼	11.98
Saskatchewan 18 89	125	111¼	−1¼	12.47
Saskatchewan 16⅛ 88	100	111¼	−1¼	12.29
Scot Intl Fin 14¼ 96	90	108¼	−1¼	13.05
Sears O/S Fin 88	500	106	−1	13.34
Sears Roebuck 10½ 91	150	19½	−0⅞	13.02
Sears Roebuck 11¾ 91	150	93¼	−2⅛	11.94
Sec Pacific 12 92	100	99½	−1¼	11.73
Shearson/Amex 12⅜ 94	100	98¼	−1¼	12.39
Shell (Canada) 14⅛ 92	125	100½	−1¼	12.05
Shell (Canada) 15⅞ 91	100	106½	−1¼	12.90
Standard Chart 11¾ 94	200	110¼	−1¼	13.14
Statoil 12 88	100	100	0	11.48
Sumitomo Fin 12¾ 91	150	101½	−1¼	11.37
Sweden 12½ 89	200	100¼	−1¼	12.80
Swedish Export 11¾ 89	100	101	−1¼	12.03
Taiyo Kobe 12 90	100	98	−1¼	12.15
Texaco 10½ 90	200	93⅝	−1¼	12.06
Texaco 10⅞ 93	200	93½	−1¼	11.78
Texaco Capital 13½ 89	200	103¼	−1¼	12.29
Texas Instr 11⅞ 91	150	98⅝	−1¼	12.20
Tokai Asia 12⅛ 91	100	98	−1⅞	12.49
Tokyo Electric 6½ 89	70	92½	−1¼	8.77
Tokyo Electric 13¾ 96	100	105½	−1¼	11.66
Toronto-Dom 12⅜ 89	50	101¼	+0¼	12.04
UBS 8 93	70	100¼	0	12.16
Veba 8 93	70	103¼	−3¼	7.40
Warner-Lambert 10⅜ 90	100	94¼	−1¼	11.70
West LB 11¾ 90	100	98¼	−1¼	12.19
Weyerhaeuser 11½ 90	60	97⅞	−1¼	12.00
Yasuda Trust 12⅜ 89	100	99¼	−1¼	12.56

FLOATING RATE NOTES	Issued	Price	Chg. on week	C.cpn
Amb Bank Cpn ⅛ 96	100	100⅛	+0⅞	12¼
BAII ⅛ 91	60	99¼	−0⅛	12
Banca Lavoro ⅛ 91	100	101½	0	10⅝
Ban di Roma [illegible] 92 CU	75	100	+0⅛	10[illegible]
Banco Hispano ⅛ 95	100	99¼	0	11[illegible]
Bankers Tr NY ⅛ 94	200	100¼	0	8[illegible]
Bank of Greece ⅛ 94	150	98½	0	8⅝
Bank of Montreal ⅛ 94 £	100	99⅞	+0⅛	10¼
Bank of New York ⅛ 96	400	100¼	−0⅛	11[illegible]
Bqe Nat Paris ⅛ 88	250	100⅛	0	8[illegible]
Bqe Nat Paris ⅛ 89	250	100⅛	0	10
Bqe Nat Paris ⅛ 91	125	100⅛	−0⅛	12[illegible]
Bqe Nat Paris ⅛ 98	250	99⅞	0	9⅜
Barclays O/S ⅛ 90	100	101	0	9⅞
Barclays O/S ⅛	600	100¼	0	10[illegible]
BBL ⅛ 95	100	100¼	0	9⅞
Bqe Nat Paris ⅛ 88	400	100¼	−0⅛	12[illegible]
SBL ⅛ 96	100	100½	+0⅛	11[illegible]
BFCE ⅛ 87	400	98⅞	−0⅛	9[illegible]
BFCE ⅛ 86	125	100⅛	0	10⅞
BFCE ⅛ 88	500	99⅞	−0⅛	9⅜
BFCE ⅛ 96	600	100⅛	0	12[illegible]
CEPME ⅛ 96 £	100	99⅞	0	10⅝
Citicorp O/S ⅛ 91 £	100	99¼	0	13[illegible]
Caisse Nat Tel ⅛ 91	250	100¼	0	10⅛
Creditanstalt [illegible] 98	150	100	−0⅛	9[illegible]
Credit Lyonn ⅛ 96	300	100⅛	−0⅛	9⅞
Cred National ⅛ 95 £	100	99¼	0	9⅝
Dai-Ichi Kangyo ⅛ 89	150	100½	+0⅛	10[illegible]
Denmark ⅛ 90	250	100½	0	8[illegible]
Denmark 0 99	200	99⅝	0	9[illegible]
Denmark [illegible] 90	500	100½	−0⅛	11¼
Dresdner Bank ⅛ 93	400	101¼	−1	11½
Eldorado Nuke 0 89	100	100⅛	0	9[illegible]
Elec de France ⅛ 95	300	100½	+0⅛	9½
Elec de France ⅛ 88	400	100½	−0⅛	10
EEC ⅛ 90	2bn	100	−0⅛	9[illegible]
ENEL ⅛ 93 £	100	99¼	0	10¼
Exterior Intl ⅛ 98	125	101	+0⅛	9[illegible]
Ferro del Stat ⅛ 99	250	100⅛	0	10[illegible]
Fiat Finance ⅛ 94	100	99⅛	+0⅛	12
First Aust Bank ⅛ 92	50	99¼	−0⅛	8⅞
First Chicago ⅛ 94	100	100⅛	+0⅛	9[illegible]
Ford Motor Cr ⅛ 91	200	99⅞	0	9[illegible]
Genfinance ⅛ 87	100	100⅛	+0⅛	11
Genfinance ⅛ 92	100	100⅛	−0⅛	9[illegible]
GZB ⅛ 91	40	100⅛	0	9⅞
GZB ⅛ 92	50	100¼	0	9½
Gotabanken ⅛ 94	50	100⅛	+0⅛	10[illegible]
GW O/S Fin ⅛ 94	100	99¼	+0⅛	10[illegible]
Grindlays ⅛ 94	100	99⅛	−0⅛	12
Ind Bk Japan ⅛ 88	60	100½	0	8⅞
INI Perpet [illegible] 00	150	100½	−0⅛	10⅛
Interfirst Tex ⅛ 89	100	100¼	0	11[illegible]
Int Bk Res Dev [illegible] 89	250	98¼	0	9[illegible]
Ireland ⅛ 93 £	50	98⅝	0	8⅞
Ireland [illegible] 94	300	100⅛	0	14[illegible]
Italy ⅛ 99	500	100¼	−0⅛	8⅝
Kleinwort Ben ⅛ 96	100	100¼	0	10[illegible]
Lloyds Eurofin ⅛ 92	100	100⅛	0	12[illegible]
Malaysia ⅛ 93	850	100½	−0⅛	9[illegible]
Marine Midland ⅛ 94	125	100	−0⅛	8[illegible]
Marine Midland ⅛ 96	125	100⅛	+0⅛	9[illegible]
Megal Fin [illegible] 94 CU	100	100	+0⅛	9[illegible]
Midland Intl ⅛ 89	125	99	0	9[illegible]
Midland Intl ⅛ 91	150	100½	−0⅛	9[illegible]
Midland Intl ⅛ 99	200	101	−0⅛	11
Mitsui Fin ⅛ 96	100	98⅞	−0⅛	12⅛
Morgan Grenfell ⅛ 94	50	100½	0	10⅛
Mtg Bk Dnmark [illegible] 94 £	50	99½	−0⅛	9
Nat Bk Canada ⅛ 91	50	100	0	10⅛
Nat West ⅛ 90	150	100	0	9⅛
Nat West Fin ⅛ 91	125	100½	0	8⅞
Nat West Bank ⅛ 92	100	100½	−0⅛	9[illegible]
Nat West Bank ⅛ 94	100	101⅛	0	10⅞
Nat West Fin ⅛	365	100⅛	−0⅛	10⅛
Neste Oy ⅛ 94	100	100⅞	0	10⅛
New Zealand ⅛ 87	350	100⅛	0	10
NZ Steel Corp ⅛ 92	300	100⅛	−0⅛	11⅛
Nippon Cred Bk ⅛ 90	50	100⅛	−0⅛	9½
Oster Ln Bk ⅛ 86	100	100⅛	−0⅛	9⅝
Offshore Min ⅛ 86	100	100⅛	0	11[illegible]
Offshore Min ⅛ 91	150	100⅛	+0⅛	9[illegible]
Oka Bank ⅛ 92	50	100½	−0⅛	9[illegible]
Pirelli Fin ⅛ 94	50	99	+0⅛	12⅛
Portugal ⅛ 92	100	98	0	10⅛
Quebec Hydro ⅛ 94	200	99¼	−0⅛	12
Queensld Coal ⅛ 96	355	100⅛	−0⅛	9[illegible]
Queensld Coal ⅛ 88	46	100½	−0⅛	10[illegible]
Renfe ⅛ 91	100	100⅛	−0⅛	10[illegible]
Royal Bk Scot ⅛ 94	75	100⅞	−0⅛	12⅛
Sanwa Intl ⅛ 92	150	100⅛	0	8[illegible]
Scandivia Fin ⅛ 93	70	100	−8½	8[illegible]
Scot Intl Fin ⅛ 92	100	99	0	0[illegible]
SEAT ⅛ 93	100	100⅛	0	11[illegible]
Skopbank ⅛ 94	75	100	0	9[illegible]
SNCF ⅛ 93 £	75	98	0	9½
Soc Generale ⅛ 90	200	100	−0⅛	12⅛
Soc Gen (⅛%) ⅛ 95	250	100½	+0⅛	10[illegible]
Soc Generale ⅛ 94	250	100⅛	−0⅛	12[illegible]
Spain ⅛ 93	200	100⅛	−⅛	10[illegible]
Spain ⅛ 87	250	100⅛	0	10
Standard Chart ⅛ 90	100	100⅛	−0⅛	9[illegible]
Standard Chart ⅛ 90	75	100⅛	−0⅛	12[illegible]
Standard Chart ⅛ 91	100	100⅛		10⅛
Standard Chart ⅛ 94	200	100⅛	−0⅛	8½
Sumitomo Tst ⅛ 94	100	100⅛	0	9[illegible]
Sweden ⅛ 91	160	100½	−1⅛	8[illegible]
Sweden ⅛ 03	1bn	101⅛	0	10[illegible]
Sweden ⅛ 24	500	100½	+0⅛	11[illegible]
Sweden ⅛	750	99⅛	+0⅛	9[illegible]
Tokai Asia ⅛ 93	150	100⅛	−0⅛	9[illegible]
Toyo Tst Asia ⅛ 99	100	100⅛	0	9[illegible]
TVO Power ⅛ 04	100	98½	0	9[illegible]
Union Bank-Norw ⅛ 88	50	98½	0	9[illegible]
Wells Fargo [illegible] 96	50	99⅛	−0⅛	8[illegible]
Williams & Glyns ⅛ 91	75	100⅛	0	12⅛
Yorkshire Int ⅛ 94 £	75	99½	0	10⅛

CONVERTIBLE BONDS	Issued	Price	Chg. on week	Prem.
Ajinomoto 3 99	120	98½	−0⅛	
Ajinomoto 5½ 98	40	118⅛	+0⅛	7.69
Bast Denki 5⅞ 87	15	148⅛	+9⅛	5.03
Bridgstne Tire 5½ 98	70	96⅞	−0⅛	−4.18
Canon 6⅜ 94	80	270½	+7	−9.23
Canon 6½ 95	50	198⅛	+4	−2.47
Canon 7 97	60	228⅛	+5⅛	−2.08
BBC Brown Bov 4⅜ 95	57	91⅛	+1⅛	−2.25
Bow Valley B 95	40	118½	−0⅛	81.68
Comsat Intl 7¼ 98	110	84⅞	−2	29.63
Daiwa Secs 5½ 98	80	151⅞	+10⅛	0.97
Dev Bk Sing 5½ 98	70	72	0	2.87
Eldem 11⅛ 94	160	106⅛	−0⅞	103.01
Elektrowatt 5 98	52	61⅛	−2⅛	18.05
Fanuc 3⅜ 98	80	169⅛	+3⅛	0.01
Fujitsu 3 98	180	94⅞	+0⅛	6.58
Intec Ins 3 99	50	79⅛	+1¼	−4.88
Konishiroku 4 96	50	96½	+0⅛	1.87
Mitsubishi H 4⅜ 99	100	90	+0⅞	3.90
Moet-Hennessy 7 99	50	101⅛	+0⅛	12.86
Murata Mfg 3½ 99	100	121⅛	+2⅛	−0.05
Murata Mfg 3½ 00	100	120½	+2⅛	1.73
Nippon Oil 3⅜ 98	80	77½	+1⅛	9.81
Ono Pharm 3⅜ 98	80	104⅛	0	−2.60
Soc Gen Surv 4½ 94	51	85	−1	145.33
Sumitomo Corp 2⅞ 98	70	90½	+4½	−1.22
Texaco Capital 11⅛ 94	1bn	100⅛	−1⅛	40.98
Texaco Capital 11⅛ 94	500	98½	−2⅛	39.65
Usair Finance 7 98	80	107⅛	−0⅛	2.13
Yamanouchi 4 90	80	240⅛	+1⅛	1.44

YEN STRAIGHTS	Issued	Price	Chg. on week	Yield
Asian Dev Bank 5⅞ 88	15	95⅛	0	7.18
Asian Dev Bk 7⅝ 94	15	99½	+0⅞	7.51
Asian Dev Bk 8⅜ 91	15	103⅛	−0⅛	7.56
Asian Dev Bk 8⅝ 92	15	105	+0⅛	7.70
Australia 8½ 91	15	104	+0⅛	7.67
Australia 8½ 92	15	104	+0⅛	7.89
Denmark 8⅛ 92	15	101⅛	−1⅛	7.98
Eurofima 6½ 86	10	100	+0⅛	6.48
Eurofima 7⅛ 94	10	100⅛	−0⅛	7.33
Eurofima 8⅜ 88	10	103⅛	+0½	7.68
Euro Invest Bk 7⅜ 89	15	102	+0⅛	7.20
Euro Invest Bk 8⅜ 92	15	103½	+0⅛	7.80
Finland 8⅜ 87	15	102⅝	+0⅛	7.04
Finland 8½ 88	15	103	0	7.58
IADB 7⅜ 94	15	100⅛	+0⅛	7.40
IADB 8⅞ 91	15	104⅛	−0⅛	7.82
IADB 7⅞ 93	15	101⅛	−0⅛	7.62
New Zealand 7⅜ 90	15	98⅛	+0⅛	7.39
New Zealand 7⅜ 89	15	101⅛	−0⅛	7.31
New Zealand 8⅜ 87	15	103⅛	+0⅛	6.98
Sweden 8½ 90	15	103⅛	+0⅛	7.75
World Bank 7 94	20	96½	−0⅛	7.54
World Bank 7⅜ 93	20	101	+0⅛	7.46
Int Bk Rec Dev 9 93	20	103	+0⅞	7.49
World Bank 8⅜ 92	20	104½	+0⅛	7.53
World Bank 8⅜ 91	20	104⅞	−1⅛	7.70

LUXFR STRAIGHTS	Issued	Price	Chg. on week	Yield
Eur Coal & Steel 7⅛ 86	500	96⅝	−0⅛	0.65
Eur Coal & Steel 7⅝ 88	600	95⅛	+0⅛	9.28
Eur Coal & Steel 10⅛ 94	1bn	102⅛	−0⅛	0.94
Euro Invest Bk 10½ 94	1bn	103⅛	−0⅛	9.97
Int Bk Rec Dev 10⅛ 88	1bn	104⅛	0	8.98

GUILDER STRAIGHTS	Issued	Price	Chg. on week	Yield
ABN 9 88	200	98⅞	−0⅞	8.03
ABN 7⅜ 89	150	100	+0⅛	7.73
ABN 8⅜ 88	150	102⅞	−0⅞	7.74
Amro Bank 8 88	200	99⅝	−1	8.18
Amro Bank 8⅜ 88	100	102½	−1⅛	7.94
Bk Mees & Hope 8⅜ 89	100	100⅛	−1	8.08
Beatrice Foods 8⅜ 88	100	101⅛	−0⅛	7.81
C C Rabo 8 88	150	99⅛	−0⅛	8.06
C C Rabo 9 88	100	103⅛	−1⅛	7.95
Denmark 8½ 91	100	100⅛	−0⅞	8.33
Int Stand Elec 8½ 88	100	102	+0⅛	7.89
Nedd Midd Bank 9 88	100	103⅝	−0⅛	7.80
New Zealand 8⅜ 89	100	101⅝	−0⅞	7.91

CANADIAN DOLLAR STRAIGHTS	Issued	Price	Chg. on week	Yield
Br Col Prov 12 93	100	96⅞	−0⅛	12.98
Bqe L'Indosuez 14 91	75	102⅛	−0⅛	13.29
Br Col Munic 13½ 91	100	103⅛	+1	12.68
Br Col Tele 12⅜ 88	70	98⅛	−0⅛	12.87
Farm Cred Corp 12⅜ 90	75	97⅛	−1⅛	12.79
Int Bk Rec Dev 12⅜ 90	75	98⅛	−2	12.40
Montreal City 12⅛ 91	70	99½	−1⅞	12.61
Quebec Hydro 14 91	75	103⅞	+0⅛	13.02

ECU STRAIGHTS	Issued	Price	Chg. on week	Yield
Australia & NZ 10⅛ 91	60	101⅛	−0⅛	10.37
Oesterreich 10⅛ 93	100	105⅛	+0⅛	9.56
Cred National 11⅛ 91	50	104⅞	+0⅛	10.24
Denmark 10⅛ 81	75	102⅞	+0⅞	10.14
Sbco Intnl 10⅞ 89	55	103	0	8.91
EEC 10⅛ 91	60	101⅛	0	10.12
EEC 11 93	50	103⅛	−0⅛	10.14
EEC 11⅛ 91	50	104⅛	0	10.26
EEC 11⅛ 93	70	104⅞	+0⅛	10.47
Euro Coal & Steel 9 94	60	105⅛	−1⅛	10.41
Euro Invest Bk 10⅛ 88	60	105	+0⅛	9.01
Euro Invest Bk 10⅛ 94	100	102⅛	+0⅛	10.23
Euro Invest Bk 11⅛ 92	75	104⅞	+0⅛	10.25
Euro Invest Bk 11⅛ 93	50	104⅛	+0⅞	10.25
Euro Invest Bk 11⅛ 96	50	105⅛	−0⅛	10.43
Gen Finance 11 90	70	103	−0⅛	10.24
Gie Finance 10⅞ 92	50	103⅛	+0⅛	10.10
Int Bk Rec Dev 10⅞ 88	100	104⅛	+0⅛	9.04
Int Bk Rec Dev 11 93	60	103⅛	0	10.31
Int Bk Rec Dev 11 93	60	104⅛	0	10.34
Italian Treas 11⅛ 90	60	102	−0⅛	10.88
Megal Finance 11⅛ 94	100	103⅛	+0⅞	10.18
Nippon Cred Bk 11 91	50	104⅞	−0⅞	10.33
Nordic Inv 8 94	50	100⅞	+0⅛	10.88
Post Och Kred 10⅛ 92	50	102⅞	−0⅛	9.60
Royal Bk Can 10⅛ 88	88	102⅞	+0⅛	10.36
SNCI 10⅞ 94	80	102⅛	−0⅛	10.33
Swedish Export 11 88	58	105⅛	−0⅛	8.93
West LB 10⅞ 91	50			

AUSTRALIAN DOLLAR STRAIGHTS	Issued	Price	Chg. on week	Yield
AIOC 12⅛ 90	42	99⅞	−0⅛	12.36
G J Coles 13½ 88	25	100⅞	−0⅛	13.16
Nat Aust Bk 12½ 88	40	87⅛	−8⅛	13.34
PISA 12⅛ 88	50	97½	−0⅛	13.20
State Bk NSW 12⅛ 88	40	100⅛	+3	12.11
State Aust 13⅛ 87	24	100	−0⅛	13.27

STERLING STRAIGHTS	Issued	Price	Chg. on week	Yield
Denmark 10⅛ 88	75	96⅝	0	11.82
Europarat 11⅛ 92	50	99	+0⅛	11.58
EEC 11½ 94	50	100⅞	+0⅛	11.21
EEC 11⅞ 93	50	101⅛	0	11.52
Euro Invest Bk 10⅛ 92	75	97	+0⅛	11.39
FFI 10⅛ 93	60	96⅞	+0⅛	11.31
Finland 11⅛ 88	60	102⅛	+0⅛	10.97
IADB 11⅛ 81	60	98⅝	+0⅛	11.63
Int Bk Rec Dev 10⅛ 88	100	87	−0⅛	11.56
Int Stand Elec 11⅛ 88	50	100⅛	+0⅛	10.66
Inv In Indust 11⅞ 91	50	99⅛	−0⅛	11.91
Ireland 11⅛ 94	90	96⅞	+0⅛	11.94
New Zealand 10⅛ 88	100	98⅝	+0⅛	11.75
SNCF 11⅛ 94	60	88⅛	+0⅛	11.47
SNCF 11⅛ 88	30	100⅛	0	11.35

EQUITY WARRANTS	Expiry date	Price	Chg. on week	Prem.
Commerzbank	31/5/88	44	0	128.36
Ciba-Geigy Int £	1/11/93	260	+20	105.68
C Itoh	20/1/87	11⅛	+1⅛	
C Itoh DM	4/5/89	43½	0	
Credit Suisse	31/5/86	15⅞	−1	93.71
Degussa Int DM	2/5/93	132	0	124.62
Deutsche Bank DM	18/6/91	123⅛	0	109.49
ICI Finance	1/6/90	403⅛	−15	
IC Industries	15/6/88	17⅛	−1⅛	201.12
Jusco	22/12/88	68⅞	+0⅛	
Kayaba Ind	15/2/89	11⅛	−0⅛	
Minebea Co	20/2/89	32⅛	+1⅛	
Mitsubishi Ch	20/1/87	91½	+4½	
Mitsubishi Co	7/11/88	13	0	
Mitsui	10/12/87	19⅛	+1⅛	
Nippon Mining	17/3/89	82½	0	
Nissho Iwai	1/2/89	7⅛	−0⅛	
Nomura Sec	31/10/88	48⅛	+13⅛	
Omron Tateisi	31/3/89	17⅛	−0⅛	
Onoda Cement	10/4/89	44⅛	+3	
Philips Gloeil	15/7/88	16	0	186.03
Prudential O/S	15/12/88	105	0	849.24
Seagram Comp	15/9/88	12½	−1⅛	94.67
Seino Trans	17/3/89	7½	0	
Siemens West DM	31/5/90	262	0	93.91
Sumitomo Cons	24/3/89	44½	+1⅛	
Sumitomo Heavy	24/2/89	5	−3½	
Swiss Bk Corp	20/12/88	27⅛	−0⅛	118.57
Tokyo Electric	14/3/89	13	0	
Tokyo Sanyo	8/6/87	140	0	
Toray Ind	9/3/87	13⅛	+0⅞	
Veba Int	15/12/93	40½	0	124.02

BOND WARRANTS	Expiry date	Price	Chg. on week	Ex. yield
Aegon Ins 11⅛ 91	14/2/89	13⅞	−0⅛	8.42
ANR Fin 15⅛ 88	15/9/87	30	0	5.29
Coca-Cola 11⅛ 91	28/11/88	29	0	0.45
Commerzbk 11⅛ 89	17/7/88	46	−3½	1.42
Denmark 11⅛ 93	15/12/88	14	−5⅛	9.10
D Nomk Cr 11⅛ 91	1/2/88	8	−3½	11.06
Dev Bk Sing 14⅛ 89	12/9/86	63	0	−0.73
Du Pont 13⅛ 88	25/8/86	41⅛	−7⅛	2.45
Ekaportfinas 13⅛ 89	15/9/87	45	−4½	1.74
Gen Elec 12⅛ 91	7/8/87	37⅛	−2	0.13
IBM Credit 13 87	19/8/85	40	−2½	−3.88
Inv In Inds 10⅛ 91	1/12/88	65	0	1.18
M Hanover 13½ 87	1/9/86	27	−5½	1.22
McDonlds F 11⅛ 94	5/1/89	16⅛	−2⅛	8.38
Morgan J P 10⅛ 90	16/8/87	11⅛	−1⅛	9.45
Nordic Inv Bk 11 90	15/11/87	8½	−1	11.06
Oester Inbk 13½ 89	9/8/87	37½	−4	3.38
Penny J C 10⅞ 90	15/10/87	8⅛	−3⅛	0.62
Post-O Kred 11⅛ 90	10/11/87	7	−2½	10.29
Ryl B Scot 11⅛ 93	10/11/88	14	−2⅛	9.68
Texaco 10⅛ 93	15/11/87	8½	−2	8.75
Texaco Cap 12⅞ 92	1/9/87	33	−7	0.58
Thmsn-Brdt 13⅛ 91	29/8/86	33	−4	8.76
Weyerhaeuser 11 90	15/11/87	9⅛	−0⅞	9.46
Xerox 13⅛ 87	15/8/85	30	−2½	−0.33

STRAIGHT BONDS: Yield to redemption of the mid-price. Amount issued is expressed in millions of currency units except for yen bonds, where it is in billions.
FLOATING RATE NOTES: U.S. dollars unless indicated. Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn=current coupon.
CONVERTIBLE BONDS: U.S. dollars unless indicated. Prem=percentage premium of the current effective price of buying shares via the bond over the most recent share price.
WARRANTS: Equity warrant prem=exercise premium over current share price. Bond warrant ex yld=exercise yield at current warrant price.

Closing prices on March 1

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

LOMBARD

Market's view of currency rates

IT IS almost a cliche that market prices provide the best available guide to the underlying forces of supply and demand. Nevertheless, this information is all too rarely used, even as a starting point, by those who think they can outguess the market.

It is for instance often overlooked that the market's view of future exchange rates is provided in the financial press every day in the table of forward rates. The usual objection to treating these as forecasts is that they "just" reflect interest rate differentials. Because German interest rates are lower than both U.S. and British interest rates there will be a forward premium on the Mark against both dollars and sterling.

But there is no contradiction between forward rates reflecting interest rate differentials and their being genuine forecasts. Spot and forward exchange rates and short-term interest rates have to form a consistent pattern or else there will be opportunities to make arbitrage profit from discrepancies.

For instance, the table shows that sterling is expected to fall against the Mark *for the indefinite future.* Suppose that there were a change of sentiment in favour of sterling, but that the Bank of England still wanted, and was able, *to maintain high* short-term rates of interest in London.

Then the immediate benefit would be felt in the spot rate, which might rise to say DM 3.8. Indeed the rise in *spot sterling* would have to be sufficient to make a future fall, in line with interest rate differentials, still a central expectation. If you like, it would have to *overshoot.*

There is more of a problem if one tries to look further ahead, as long term forward markets are often thin and unrepresentative, where they exist. But an implicit forecast can still be derived from fixed interest yields on different maturities.

There is a common misunderstanding that those who regard explicit or implicit market forecasts as the best guide available to public policy and business decisions believe that the market is always right.

On the contrary, we know that exchange rates will be affected by many unforeseeable factors. The claim is the much more modest one that market prices are the least bad guide we have and that it is difficult to do much better. Otherwise people would act on their views and rates would already have moved.

Views on future exchange rates are very uncertain and the forward market rates represent the centre of a large range. Even a year ago many people thought the dollar was absurdly high; and on the then available knowledge a rate of roughly DM 2.50 to the dollar was the best guess that could be made for March 1985.

The table of implicit forward rates does not suggest, as might seem at first glance, that there will be a soft landing for the dollar. It is just as consistent with the belief that it *may* either continue to reach for the stars or come down with a crash, with a very slight preponderance for the latter view. Thus we really do not have a crystal ball to see into the future. But such little knowledge as we have is encapsulated in the market.

Samuel Brittan

FORWARD MARKET RATES
March 1, 1985

	Spot	3 month	6 month	1 year	2 year	5 year
DM per $	3.36	3.33	3.30	3.23	3.13	2.90
DM per $ (March 1, 1984)	2.61	2.58	2.55	2.49	2.33	2.06
DM per £	3.60	3.53	3.48	3.40	3.29	3.07
$ per £	1.07	1.06	1.06	1.05	1.05	1.06

N.B. Rates up to and including one year are forward quotation. The two-year forward rate is obtained from yields on two-year deposits; the five-year rate from AAA Eurobonds.

Source: Brendan Brown, Phillips and Drew

CORPORATE FINANCE

U.S. institutions show teeth as shareholders

WHATEVER happens in the controversial takeover battle *for Phillips Petroleum,* the ninth biggest U.S. oil company, the saga will be remembered as marking the first real test of the effectiveness of the new wave *of institutional shareholder* activism which has begun to emerge on Wall Street.

U.S. institutional shareholders have come under increasing attack *lately,* for not exercising their rights vigorously enough. The big institutions have on several occasions been made to look foolish by the managements *of companies whose stock* they own, and have let it be known that they are not going to let it happen again in the Phillips case.

To understand why the institutions are angry, one has only to look at what has happened to the value of their shareholdings in another major oil company, Texaco. A year ago this week, Texaco bought back 9.9 per cent of its shares from the Bass brothers, the wealthy Texas family, because it was apparently worried that the shares might fall into unfriendly hands.

On the eve of the deal Texaco's shares were trading at $44¼. Texaco paid the Bass brothers $50 per share for their shares and the next day, the remaining shareholders found that the market price had fallen to $39¼.

A year later, the Dow Jones Industrial Average is 140 points higher and the New York Stock Exchange composite index is up by 16 per cent. Meanwhile, Texaco's shares are trading at $35¼, and unless one is a super bull on the oil business, it would be fair to assume that it is going to be some time before the Texaco share price gets anywhere near $50 again.

Apart from being made to look foolish by such moves, U.S. pension fund managers are also conscious that they risk violating their fiduciary duties if they sit by idly, while corporate management manouvres damage the value of their shareholdings.

Mr Jesse Unruh, treasurer of the state of California, has been working for some months to instil a more activist spirit among his fellow pension fund managers and has played a leading role in the establishment of Council of Institutional Investors, which opened for business in Washington last month.

The council, according to its bye-laws, has been organised "to study on a non-partisan basis issues of corporate governance, policies or practices affecting the well-being and financial security of the millions of participants and beneficiaries covered under benefit plans established by the institutional shareholders associated with the council."

While the byelaws may sound vague, its members stress that it is not going to be a mere talking shop for public pension fund officials.

Aside from attacking "greenmail" payments, such as the Texaco deal with the Bass Brothers, the new council is on the lookout for "self-serving management practices like overly generous employment agreements," and "bad business judgments," such as selling valuable properties or needlessly increasing company debt.

The council plans to exploit the cumulative influence of its members' shareholdings. It is early days yet, but its founders say that it could start recommending the way its members should vote in controversial shareholder votes, like the Phillips recapitalisation plan.

It could decide to sue companies which engage in "controversial corporate actions" and propose legislation to curb practices which harm its members' shareholdings.

The establishment of the council has already come under attack by some of *Wall* Street's corporate lawyers, who argue that it might *well* develop into some sort of vigilante gang more interested in getting together with the corporate raiders to "bust up" vulnerable companies.

But the council is quick to rebut these "unwarranted alarmist statements" and has gone to some lengths to prove that in the case of Phillips, the vote against its recapitalisation plan should not be interpreted as moral support for Mr Carl Icahn's hostile tender offer.

"We are long-term investors," says Mr Harrison Goldin, council co-chairman and comptroller of the City of New York. "We are not traders, bust-up artists nor highwaymen. We have no wish to manage these companies, just invest in them and maximise our returns consistent with safety."

William Hall

Montedison MD in surprise resignation

By Alan Friedman in Milan

MR JOHN SWEENEY, one of two principal managing directors at Italy's Montedison chemicals and health care group, announced his resignation over the weekend from the Milan-based group.

The surprise resignation from Mr Sweeney, who has served for the last three years as managing director of the fine chemicals division—which accounts for more than 50 per cent of Montedison turnover—comes just as Montedison is completing a *radical reorganisation* of its management.

Mr Sweeney, who said he wished to "pursue other activities back in the U.S.," was also an executive director of the group. He had been hand-picked by Sig Mario Schimberni, Montedison's chairman, who three years *ago* assembled a top-level team of managers from around the world to reorganise the loss-making group.

After suffering record losses in 1982, Montedison reduced its deficit in 1983 to L322bn ($154m) and is expected to announce results for last year at the break-even mark.

Montedison said yesterday that it had accepted Mr Sweeney's resignation "with regret."

Coastal Corporation bids for American Natural

BY PAUL TAYLOR IN NEW YORK

COASTAL CORPORATION, the Houston-based energy group, will today begin a $60-a-share cash tender *offer for* "any and all" the shares of American Natural Resources, a Detroit-based oil and gas group. The hostile bid, which had been expected, values American Natural Resources at $2.3bn.

American Natural had earlier said it would oppose any takeover attempt by Coastal. Last week the company said it was establishing a publicaly traded limited partnership for its oil and *gas* reserves.

Coastal said its board had authorised a public tender offer *to* begin today. The company, which has recently been involved in a number *of* takeover battles, said the offer would not be conditional on any minimum number of shares being received.

Ahead of the formal tender offer, speculation on Wall Street about a bid had sent American Natural Resources shares soaring to a 12-month high.

Volvo names members of pharmaceutical consortium

BY DAVID BROWN IN STOCKHOLM

VOLVO, THE Swedish motor and industrial group, has announced that a series of closely related companies will join it in its latest move into the pharmaceuticals and biotechnology sector.

Staven, a holding company controlled in equal parts by Skanska, the large construction and investment group, Cardo, the sugar and biotechnology company, and Custos, the investment concern, is to take more than half of Volvo's recently purchased stake in Pharmacia, one of Sweden's largest pharmaceuticals and biotechnology groups.

Early last month, Volvo paid about Skr 650m ($68m) to become Pharmacia's largest single shareholder, with 3.2m shares corresponding to 26.6 per cent of the votes, and announced plans to form a sectoral consortium.

Olivetti joint venture plan scrapped

By Our Milan Correspondent

OLIVETTI, Italy's leading data processing equipment maker, has scrapped plans for a joint venture with Stet, the state-owned telecommunications and electronics holding company, in the field of factory automation.

Olivetti and Stet's *Selenia*-Elsag subsidiary had been working for more than nine months on plans to manufacture automated machine tool equipment on a joint basis. But at the weekend Olivetti said the two parties had found they were "unable to reach a co-operative agreement in the industrial automation sector."

The plan had been for Olivetti Controllo Numerico (OCN), a subsidiary of the Ivrea-based group, to join forces with Selenia-Elsag. Olivetti said however that for technical and economic reasons it was not possible to conclude the planned agreement. Instead, OCN will continue to operate "on an autonomous basis in the sector," according to Olivetti. The two companies do plan however to seek an agreement on servicing in the sector.

OCN, which has a factory in southern Italy, is one of four companies in Olivetti's *automated machine tools division.*

WestLB operating profits to top DM 1.1bn of 1983

BY JOHN DAVIES IN FRANKFURT

WESTDEUTSCHE Landesbank, (WestLB), West Germany's largest publicly owned bank, improved operating profits last year but has already indicated that it is putting all its earnings into reserves and risk provisions.

In a preliminary report, WestLB said that group operating profit, which has not yet been disclosed, would exceed 1983's DM 1.1bn ($330m).

After tax payments and transfers to the reserves of WestLB's home-building savings bank, the remaining earnings will be put aside for risk provisions, notably to cover foreign lending risks and the problems of Deutsche Anlagen-Leasing (DAL).

WestLB's group balance sheet total grew by 4.4 per cent to DM 142bn last year, with restrained demand from business customers for credit.

● Wella, the West German hair care company, increased its world-wide sales by 15 per cent to DM 1.63bn last year and has also strongly improved its earnings.

The company, which went public with an issue of non-voting preference shares in 1983, has not disclosed its 1984 profit details so far but it said group profit would probably show a bigger increase than sales revenue, while the parent company's net profit would be up by slightly more than 20 per cent.

In 1983 Wella lifted group profit by 12 per cent to DM 58.2m ($17.3m), while the Darmstadt-based parent company raised profit by 12.5 per cent to DM 16.2m.

Wella said that its foreign companies achieved unexpectedly high sales increases in the final quarter.

● Schering, the West German pharmaceuticals and chemicals group, increased sales last year by 14 per cent to *DM 4.9bn* ($1.47bn). Earnings were not disclosed but were said to have "distinctly improved," writes Leslie Colitt in Berlin.

Earnings improved as a result of good performances by foreign subsidiaries, especially those in the U.S. Turnover was further improved by the rise of the *dollar against the D-Mark.*

Sales abroad last year rose 16.2 per cent to DM 4bn while sales in West Germany were up 4.7 per cent to DM 875m. Pharmaceuticals turnover rose 11 per cent to DM 2bn, agrochemicals sales were up 15 per cent to DM 1.4bn, and industrial chemicals sales rose 21 per cent to DM 907m.

Merrill Lynch asks Rundlett to leave

By Our New York Staff

MERRILL LYNCH, the Wall Street financial services group, has "asked for, and accepted," the resignation of Mr Donald Rundlett, chairman and chief executive of Merrill Lynch Private Capital, a unit of the firm's consumer markets division which caters to the needs of wealthy individual customers.

The firm gave few details of the reasons behind the move. In a brief statement, Mr *Daniel Tully, president of the* consumer markets division, said Mr Rundlett's resignation was demanded because of "differences over policy matters."

هكذا من الأصل

BUSINESSMAN'S DIARY

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

UK TRADE FAIRS AND EXHIBITIONS

March 5-8
International Powder and Bulk Solids Exhibition—(POWTECH) (01-572 2121)
NEC, Birmingham

March 5-31
Daily Mail Ideal Home Exhibition (01-222 9341)
Earls Court

March 6-8
Digital Equipment Hardware and Software Exhibition — DEXPO EUROPE (01-582 9256)
Olympia

March 10-13
Glass and Glass Technology Exhibition — GLASSEX (0378 77966)
NEC, Birmingham

March 11-14
International Floorcoverings Exhibition (02432 5537)
Olympia

March 12-15
Tunnelling '85 International Exhibition (01-572 2121)
Met. Exhibition Hall, Brighton

March 16-19
British Designer Show (01-385 1200)
Olympia

March 19
Roofex: Roofing, Cladding and Insulation Exhibition (0322 77788)
Albany Hotel, Glasgow

March 21
Roofex:
Grosvenor Hotel, Edinburgh

March 26-28
The Eighth European Information Technology and Office Automation Exhibition (01-647 1001)
Olympia

March 26-28
Computer Aided Design Exhibition (01-643 8040)
Met. Exhibition Hall, Brighton

OVERSEAS TRADE FAIRS

March 3-7
International Spring Fair (01-486 1951)
Utrecht

March 3-7
Asian Safety, Security, and Fire Equipment Exhibition (01-487 2622)
Kuala Lumpur

March 5-9
International Power Generation and Energy Exhibition—POWER-TECH (01-683 1158)
Kuala Lumpur

March 5-9
Toy, Gift & Stationery Spring Show (01-839 5901)
Taipei

March 7-17
International Motor Show
Geneva

March 11-14
Middle East Oil Show (01-486 1951)
Bahrain

March 12-14
Semicon Europa Electronics Show (01-353 8807)
Zurich

March 16-20
Second Arabgas Technology Exhibition and Conference (01-487 2622)
Dubai

March 19-23
International Printing and Packaging Machinery and Materials Exhibition — PRINTING AND PACKAGING INDONESIA (01-486 1951)
Jakarta

March 22-27
International Travel Exhibition (021-705 6707)
Budapest

April 2-4
Unix Systems Exhibition (Hardware and Software) (0763 73039)
Paris

April 2-6
Second International Exhibition for Wire, Cable and Optical Fibre Industries (0727 63213)
Tokyo

BUSINESS CONFERENCES

March 5
The Industrial Society: Use your share options (01-839 4300)
3 Carlton House Terrace, SW1

March 6
Institute of Credit Management: 1985 National Conference (0780 56777)
Hilton Hotel, W1

March 8
Longman Seminars: Oil and gas law—the joint operating agreement (01-242 2548)
Cavendish Conference Centre, W1

March 11-12
Euromoney International Financial Law Conference (01-236 3288)
Intercontinental Hotel, W1

March 13
PRCA: Industrial and Technical Public Relations (01-245 6444)
Waldorf Hotel, WC2

March 13
Health Services Supply Council/Association of National Health Services Supplies Officers: Choosing priorities for NHS high-technology medical equipment (0272 423271)
Olympia

March 14
Chatham House: Japanese management style and the experience of European affiliates in Japan (01-930 2233)
St James's Square, SW1

March 17-19
Metal Bulletin's Fourth International Iron Ore Symposium (01-633 05025)
Sheraton Hotel, Rome

March 19-20
FT Conference: Cable television and satellite broadcasting (01-621 1355)
Royal Lancaster Hotel, W2

March 20
European School of Management Studies: Excellence exemplified—a European perspective (0865 727677)
Wolfson College, Oxford

March 20-22
Seatrade Conferences: Money and Ships in the City 85 (01-623 21500)
Barbican Centre

March 22-24
National Federation of Self-Employed and Small Businesses Annual Conference and Business Exhibition (01-520 7652)
Kensington Town Hall

APPOINTMENTS

New vice-chairman at Grindlays Bank

Mr R. A. D. Nicolson, deputy managing director of AUSTRALIA AND NEW ZEALAND BANKING Group has been appointed executive vice-chairman of GRINDLAYS BANK, which was acquired by ANZ in September 1984. Mr D. T. Craig has been appointed senior managing director of Grindlays. He had been on secondment to the bank from ANZ as an executive director. Mr R. F. B. Logan, who joined Grindlays as group chief executive in November 1983 has resigned.

*

Mr Frank R. Reber has been appointed a non-executive director of RELIANCE MUTUAL INSURANCE SOCIETY.

*

Professor Raymond Rees has been appointed a part-time member of the MONOPOLIES AND MERGERS COMMISSION.

*

Mr Jeff Sandiford has been appointed chairman and managing director of SINGER LINK-MILES, Singer's newly established UK operating company. Mr David Blakemore has been appointed director and general manager of the flight simulation division, and Mr John Mottram as director and general manager of the systems simulation division. Gen W. N. J. Withall has been appointed marketing director of Singer Link-Miles and Mr David O. Rothera is to be financial director and company secretary.

*

Mr Robert Williams has been appointed property director of WATNEY MANN & TRUMAN BREWERS. He has also been appointed to the board.

*

Mr Charles Skey and Mr Bryan Blamey, chairman and chief executive of R. A. Edwards & Co (Holdings) have been appointed to the board of STURGE HOLDINGS following Sturge's acquisition of R. A. Edwards from Sedgwick Group.

*

Mr Liam Swords has been appointed managing director of CHARLES LETTS. He replaces Mr Anthony Letts, who remains as chairman.

*

Mr P. A. Sussmann has been appointed executive vice-president of AMETALCO, a subsidiary of AMAX, and managing director of AMETALCO TRADING, a subsidiary of Ametalco and Sumitomo, following the retirement of Mr R. S. P. Pinguet. Mr S. H. Phillips has been appointed a director of Ametalco and Ametalco Trading, and Mr A. I. Baer has been appointed a director of AMETALCO MERCHANTING.

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PINNACLE INSURANCE, a subsidiary of Moorgate Mercantile Holdings, has appointed Mr Michael S. Morris to the board as a non-executive director. Mr Morris recently retired as director-general of the British Insurance Brokers Association.

*

Mr Jon Westwood has been appointed to the board of HARDANGER PROPERTIES.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY

COMPANY MEETINGS—
Fleming Claverhouse Inv. Tst., 8, Crosby Square, EC, 2.15
Hoggett Bowers, Park Lane Hotel, Piccadilly, W., 11.00

BOARD MEETINGS—
Finals:
British Vita
Child Health Research Inv Tst
Hawley
Ransomes Sims and Jefferies
Rights and Issues Inv Tst
Royal Insurance
Woodhouse and Rixson
Interims:
Bryant (Derek)
CVD
Mindminster
Polytechnic Marine

DIVIDEND & INTEREST PAYMENTS—
AE 2.5p
Asscd. British Foods 1.7p
BFD Fin. Co. 1996 $232.81
Bulmer (H. P.) 2.24p
Ensearch Cpn. 40 cts.
Hardys and Hansons 10.4p
Holt Lloyd Intnl. 1.65p
Italy (Rep. of) 1999 £22.19
M. & G. Dual Tst. 13.8p
Park Food 1.2p
R.F.D. Grp. 1.015p
Scottish English and European Textiles 1.4p
Societe Generale 1990-95 £284.72

TOMORROW

COMPANY MEETINGS—
First Leisure, Prince of Wales Theatre, Coventry Street, W., 12.00
Grand Met., Lyceum, Wellington Street, Strand, W.C., 11.00
Kelsey Inds., Kelsey House, Wood Lane End, Hemel Hempstead, Herts, 11.00
Winterbottom Energy Tst., Great Eastern Hotel, Liverpool Street, E.C., 10.30

BOARD MEETINGS—
Finals:
Candover Invs
Fleming Merc. Inv Tst
Instem
Johnstone's Paints
Natwest Bk
Oriflame Intnl
Prov Fin
Unilever
Interims:
AAH
Consd Gold Fields
Moran Tea

DIVIDEND & INTEREST PAYMENTS—
Chase Manhattan Cpn. 2009 $239.06
Fleming Claverhouse 6.2p
General Foods Cpn., 62.5 cts.
Gillette Co. 65 cts.
Guinness (Arthur) and Sons 4.62p
Rexnord Inc. 11 cts.
Reynolds (R. J.) Inds. 85 cts.

WEDNESDAY MARCH 6

COMPANY MEETINGS—
Countryside Props., Great Eastern Hotel, Liverpool Street, E.C., 11.00

BOARD MEETINGS—
Finals:
Anglo Am Ind Cpn
Antofagasta
BSR Intnl
Fed Housing
Gen Accident Fire and Life Assnce
Heywood Williams
Jourdan (Thomas)
Lex Service
Liberty Life Assn Africa
Midland Bk
Svenska Cellulosa Aktiebolaget
Interims:
Blagden Inds
Burndene Invs
Galliford

DIVIDEND & INTEREST PAYMENTS—
Ault and Wiborg 8¼pcDb 1988-93 4.125pc
Blue Circle Inds. 9pcDb 1992-97 4.5pc
British-American Tobacco 7pcLn 1982-87 3.5pc
Christiania Bank 1994 £25.33
Cromane Consumer Prods. 7½pcLn 1987-1992 3.75pc
Dares Ests. 8pcLn 1992-97 4pc
First Interstate Overseas 1995 $235.94
Ford Intnl. Cap. Cpn. 6pcLn 1981-87 3pc
IMI 7¼pcLn 1986-91 3.625pc
Joseph (Leopold) 9¼pcLn 1997-2002 4.625pc
Kelsey Inds. 5.5p
Midland Intern 1999 £622.19
Redland 7½pcDb 1990-95 3.75pc
Sears Eng. 8¼pcDb 1987-92 4.125pc
Waddington (John) 10½pcDb 1990-95 5.25pc
Watney, Mann and Truman 7¼pcLn 1994-1999 3.625pc. 8pcLn 1990-95 4pc
Wells Fargo 1994 $235.94
Whitbread 9¾pcDb 1991-96 4.875pc
Yorkshire Chems. 10pcDb 1991-95 £124.63

THURSDAY MARCH 7

COMPANY MEETINGS—
Asscd. Fisheries, St Ermin's Hotel, Caxton Street, S.W., 12.00
Plastic Constructions, Chamber of Industry and Commerce, 75, Harborne Road, B'ham., 12.00
Warner Estate, Claridge's, Brook Street, W., 12.15

BOARD MEETINGS—
Finals:
Barclays
Barlow Hldgs
BP
Cadbury Schweppes
Comml Union Assnce
Corah
Davies and Metcalfe
Energy Recovery Inv
Fife Indmar
Geo Mng Union Cpn
Jobsens Drilling
Noro Inds
Interims:
Consd Plants
Ocean Wilsons
Sinclair (William)

DIVIDEND & INTEREST PAYMENTS—
BLMC 6pcLn 1998-2003 3pc. 7½pcLn 1987-92 3.75pc. 8pcLn 1998-2003 4pc
Barclays Bank 7½pcLn 1986-91 3.75pc
Barclays Bank Intnl. Ln 1986-91 3.75pc
Industrial Credit Cpn. 9p
International Income Prop. 23cts.
M. & G. American Smaller Co.'s. Fund D.98p
Multibanco Commermex SA 1992 $320.52
Multitone Elecs., 1.1p
Nedlibra Fin. 1988 $237.5
Ratners (Jewellers) D.57p
Sainsbury (J.) 7¼pc1stDb 1987-92 3.625pc
Southern Business Leasing 1.5p
TR Pacific Basin 4½pcPf 1.575p

FRIDAY MARCH 8

COMPANY MEETINGS—
Edenspring Invsts., Hilton International Kensington, 179-199, Holland Park Ave., W., 10.00
Newman-Tonks, Midland Hotel, B'ham., 12.00
Telecomputing, 244, Barn's Road, Oxford, 12.30

BOARD MEETINGS—
Finals:
Alliance Tst
Anglo Am Gold Inv
Harmony Gold Mng
Lloyds Bk
New Darien Oil Tst
Wilkes (James)
Yarrow
Interims:
Framlington
Unigroup
Zambia Copper Invs

DIVIDEND & INTEREST PAYMENTS—
Allied Cpn., 45cts.
Boeing Co. 35cts.
Country and New Town Props., D.5p
Damon Cpn. 5cts.
Dun and Bradstreet Cpn. 47cts.
East of Scotland Onshore D.65p
Irish Civil Service Building So., 34p
Randfontein Ests. 600cts.
Renold 7⅝pc2ndDb 1992-97 3.812pc
Restmor Grp. 9.75p
Rustenburg Plat. 35cts
Stroud Riley Drummond D.75p
Sun Co. 57.7cts.
Tate and Lyle 12.5p
Texaco Inc. 75cts.
Vibroplant 3.3p
Warner-Lambert Co. 37cts.
Western Areas 30cts.
Westpool Inv. Tst. D.344p

SATURDAY MARCH 9

BOARD MEETING—
Interim:
Sime Darby

DIVIDEND & INTEREST PAYMENTS—
General Motors Cpn. 125cts.
International Bus. Mach. 1.1cts.
Signal Companies Inc. 25cts.
Travellers Cpn. 51cts.

SUNDAY MARCH 10

DIVIDEND & INTEREST PAYMENTS—
Agricultural Mort. Cpn. 9¼pcDb 1980-85 4.625cts. 6½pcDb 1985-90 3.3125cts.
Grace (W. R.) 70cts.
Scott Paper 28cts.
Southern Rhodesia 3½pc 1980-85 1.75pc
3½pc 1980-85 1.75cts.
Treasury 5½pc 2008-12 2.75pc.

CONTRACTS

Fairclough wins £8.8m hotel work

BY JOAN GRAY, CONSTRUCTION CORRESPONDENT

FAIRCLOUGH BUILDING has won an £8.8m contract to refurbish London's Hyatt Carlton Tower Hotel.

The project — Fairclough's biggest hotel refurbishment in London to date—involves adding a new marble-pillared entrance, canopies and balustrades to the front of the hotel to make it look less like an office block, installing a health club and business centre, and refurbishing 202 guest rooms, suites and corridors.

The refurbishment forms part of tha Hyatt Carlton Tower'e fight to expand its share of the highly competitive market for five-star hotel accommodation in London.

The company will he undertaking some landscaping on the roof of the hotel's nine-storey section, so that fastidious guests in tha adjacent 18-storey tower will look down on trees, tubs and terraces rather than on a network of service ducts.

The refurbishment's aim is to create a "more residential and country house atmosphere," the management says.

The refurbishment follows major upgradings by the Intercontinental, Dorchester, Ritz, Piccadilly and Hilton Hotels, all aiming to increase their share of the lucrative five-star hotel market.

Fairclough won the contract in competitive tender. "The £6m refurbishment we carried out for the Dorchester Hotel three years ago gave us experience which put us in good stead." Mr John Newton, marketing director, said.

"We are very aware that the show must go on as you're building around a client's existing profit centre with hotel guests still in occupation. The hotelier must stay open during the work so the contractor has to be in sympathy with tha hotel staff."

Fairclough is also currently building Wales's first Holiday Inn, in Cardiff, a £6m contract dua to be completed in May next year.

The company has also won e £2m contract to build a 96 bedroomed hotel on tha Kennet and Avon Canal in Bath.

A £1.5m contract for British Telecom's new telephone engineering centre in Chelmsford, Essex, and a £1m contract for a library, nursery and sports hall for Gateshead Metropolitan Borough Council have also been awarded to the company this week.

Fairclough is also building the City Corporation's new City of London School on the banks of the River Thames in the heart of the City, a contract believed to be worth in excess of £10m.

£84m orders for Lilley

FJC LILLEY GROUP companies have won contracts totalling £84m, including £66.4m-worth of business overseas.

The biggest is e $25.5m (£23.1m) U.S. contract from the Washington Metropolitan Area Transit Authority gained hy Harrison Western in a joint venture with Franki-Denys. It involves the construction of twin 19.5 ft diameter 2,500 ft long tunnels below the Anacostia river for the latest addition to the Washington DC metro. Harrison Western has also been awarded, in joint venture with Hunzinger Construction, three contracts worth $15.75m (£14.3m) in all hy the Milwaukee Metropolitan Sewerage District for dropshafts and ancillary facilities.

In addition, Harrison Western this month begins boring a 12 foot diameter power tunnel for the Tri-dam Authority hydro-electric project in north eastern California. The work is valued at $25m (£22.8m).

In the United Arab Emirates, Lilley International has been awarded a £6m sewerage contract for the municipality of Dubai.

Among the group's UK contracts is the £3.5m construction of tha Creetown hy-pass, awarded to Lilley Construction by the Scottish Development Department. Lilley Construction is also to build a £2m pumning station for Weymouth and Portland Borough Council. Eden Construction will reconstruct 4.2 miles of the M6 for Cumbria County Council. The contract is valued at £3m. Eden has also gained land reclamation work for Cumbria County Council worth £1.12m and will carry out further work for British Nuclear Fuels at Sellafield valued at £3m.

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SIR ROBERT McALPINE & SON has been awarded a £4.7m contract for the construction of a Z-shaped office block on the old Cadby Hall site in Hammersmith for Cadby Hall Developments, a suhsidiary of J. Lyons. The six-storey huilding will be of reinforced concrete frame construction on piled foundations and finished in glass curtain walling. The work includes the installation of three passenger lifts and the provision of a basement car park.

Shops and offices for the City

TAYLOR WOODROW CONSTRUCTION has heen awarded a £7m contract hy City of London Real Property, part of Land Securities, to build an office hlock in the City of London. Work has started on the development, fronting on to hoth Philpot Lane and Eastcheap EC3. It is due for completion in August 1986.

A seven-storey building providing abont 32,000 sq ft of office space is to be huilt in Philpot Lane. The building will have a reinforced concrete frame on piled foundations. The external cladding will be curtain walling. There will also be a further 8,000 sq ft of office space, together with restaurant or retail units at ground and basement levels, in tha other part of the development on the corner of Eastcheap and Philpot Lane. This involves the refurbishment of a listed huilding with a new extension behind a partly retained facade.

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RUSH & TOMPKINS has won a 4.5m contract to build an eight-storey office hlock at 10 Aldersgate Street in the City of London. The 52,000 sq ft building for Office & Commercial Developments, will he finished in Portland stone, hronzed aluminium and lead. Work started last week and comnletion is scheduled for July 1986.

*

COSTAIN CONSTRUCTION has won a £2.7m contract to build a new packaging and distribution centre for Lucas CAV at Haddenham, Bucks. The building, which is to featura a clear span of not less than 60 metres, is a part single, part three storey unit to be constructed on a site already occupied by Lucas CAV. Work has begun on the project and is scheduled for completion hy March 1986.

The Property Services Agency has awarded a £2.5m contract to

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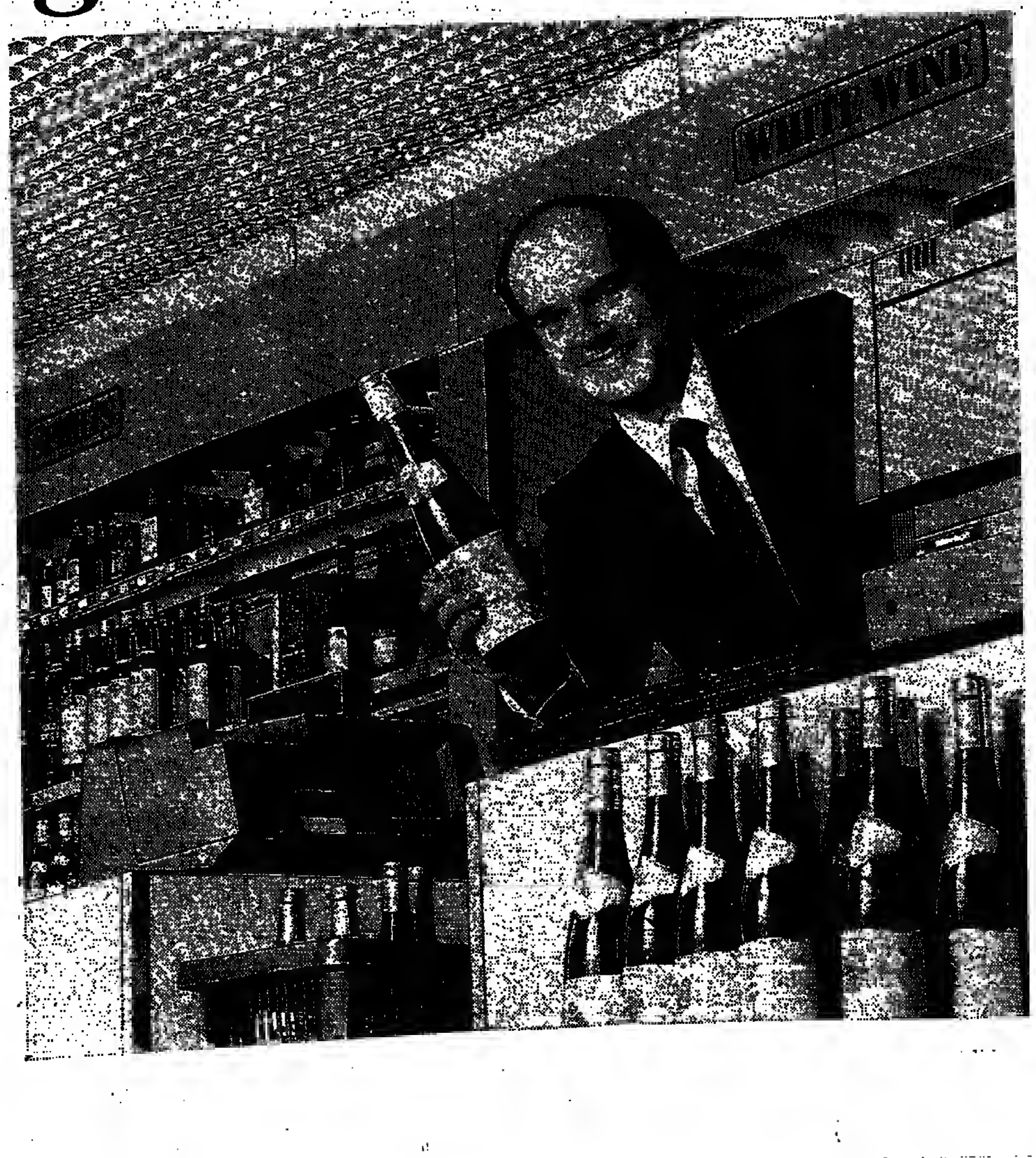
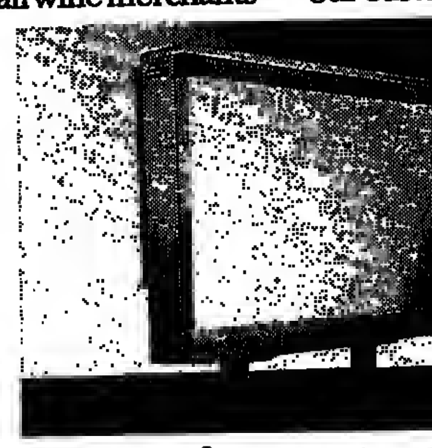
NORWEST HOLST CONSTRUCTION to build a reference collection and exhibition building in the Royal Botanic Gardens, Kew. Work has started and is due for completion in July 1986. A single-storey building of 2,245 sq metres will house the reference collection and library and a permanent exhibition hall.





H & C's bid reaches first closing date tomorrow

The case for Pauls independence

BY ALEXANDER NICOLL AND ANDREW GOWERS

Harrisons & Crosfield's £100m bid for Pauls has, so far at least, been conducted in a gentlemanly fashion befitting two companies which had their origins as commodity traders in colonial days.

Shareholders in Pauls, however, face a rude choice: whether to accept the immediate financial advantages stressed by the plantations and chemicals group, or to stand by a company which has had a profits plateau for four years, but is now promising strong growth under an admired management.

Pauls, led by chief executive Mr George Paul, 45, is building a flavours and fragrance division and branching into human foods after coping determinedly with structural problems in its two main industries—animal feeds and malt.

Britain's animal feed business, on which Pauls depends for nearly half its profits, was already suffering from overcapacity when the EEC put quota restrictions on milk production last April.

UK dairy farmers swiftly cut costs by boosting reliance on grass and slashing their purchases of cattle feed. Dairy compound sales are estimated to have dropped by around 20 per cent last year, taking a 10 per cent bite out of the overall animal feed market.

Pauls, ranked third in the industry after Unilever's BOCM-Silcock subsidiary and Dalgety in terms of national sales, has not suffered nearly as much as some of its rivals.

Pauls' feed sales may only have dropped by around half the national average, and the company claims to have succeeded in boosting its national market share by one percentage point to just short of 10 per cent—helped by buoyant sales of pig feed.

Neither is Pauls complaining about the profitability of its feed business. Despite the drop in volume and keen competition, Mr Paul says margins have held up remarkably well.

The feed industry has been slow to rationalise. Even before the trauma of milk quotas, compounders' capacity was said to be in surplus to the tune of 1m tonnes, or around 10 per cent; over-capacity is now believed to be at least double that figure.

But in comparison with other companies in the field, Pauls is probably not in a bad position. It reacted exceptionally swiftly to the imposition of milk quotas, cutting its agricultural division's workforce by more than 10 per cent and introducing a streamlined regional management structure based on profit centres in individual feed mills.

What is more, Pauls is widely regarded as being among the more efficient feed producers. A long-standing programme of feed mill modernisation is being completed this summer with the opening of a new plant at Shepshed.

Mr Thomas Prentice, chairman of Harrisons & Crosfield

Overcapacity in the malt market has been dealt with in similar fashion, with the closure of two maltings out of 11. Pauls has also ended a disastrous venture into the West German malting industry: Mr Paul says the company has already sold enough malt for 1985 and that margins have improved.

A further handicap has been the reduction of capital allowances in last year's budget, which will cause a reduction in Pauls' earnings per share for the year ending this month.

With rationalisation having reduced debt by £10m to £22m, Pauls has embarked on a growth programme which will reduce dependence on its mature mainstream businesses. One-third of its business is intended to be in human foods—it acquired a soup, sauce and cereal maker last year — and flavours and fragrances, to be augmented with a £23m purchase of a U.S.-based private company.

Mr Paul argues that a takeover would de-motivate Pauls' employees, two-thirds of whom are shareholders. The company has short lines of communication and takes decisions quickly, he says, and would not benefit from an extra layer of management.

There is no doubt, however, that H and C has struck at Pauls' most vulnerable moment, with the rewards of rationalisation and diversification still to come. Its sharp hike in dividends does not match the increase in income offered by H and C's share offer.

Some City analysts have nevertheless joined Paul's in questioning the suitability of H and C, whose primary experience is outside both Britain and Pauls' businesses, to run Pauls. It is seeking to reinvest in a UK agricultural arm the proceeds of the required sale of some of its plantations to Malaysian interests.

"We find it breathtaking that H and C blithely suggests that Pauls shareholders should unflinchingly swop their relatively safe investment for the totally unfamiliar and unquantifiable risk of tropical agriculture," stockbrokers Henderson Crosthwaite said in a recent analysis.

Until 1984, for which it is forecasting a 45 per cent increase in pre-tax profits to £82m, H and C had a flat profits record. Taxable income had fluctuated either side of a £52m average for seven years, and earnings per share for 1983 were slightly below 1977. The company did, however, steadily increase its dividends.

Among supporters of the H. & C. bid, Bob Havill at James Capel says "it makes sense to diversify away from the plantation interests. The company needs a stronger UK base." Temporary earnings dilution, H. & C. backers argue, will be compensated by a stronger long-term outlook and reduced dependence on cyclical markets for tropical commodities.

The stock market, which initially anticipated a higher bid from H. & C. or elsewhere, is now arguing against Pauls. Friday's 335p closing price, down 10p, compares with the 334p value of H. & C's share offer and the 320p cash alternative, which it 13 times Pauls' current year earnings.

Edwardes says stand fast against BTR bid

Sir Michael Edwardes, chairman of Dunlop Holdings, has written again to shareholders over the weekend urging them to stand fast against the £33m takeover bid from BTR.

Branding BTR's offer as "both badly timed and pitched far too low" Sir Michael asks shareholders to "confront BTR's corporate opportunism with determination."

He writes that "BTR has badly mis-judged the situation and will have to increase its offer massively if it is to have any chance of acquiring Dunlop."

"If it increases its offer I will write to you immediately with your board's views and advice on what to do—in that event you will have plenty of time to make up your mind."

He also reiterates his pledge to provide up to date financial information on the group as soon as posible. This is not ready yet, according to Sir Michael, but the group is "using its best efforts" to bring shareholders up to date.

Dunlop has already agreed with the Panel on Takeovers and Mergers that its reconstruction proposals and appraisal of its current financial position and prospects will be available by March 11.

On Friday, Dunlop's shares closed ½p lower at 44p compared to BTR's cash offer worth 20p per share. The bidder's shares stand at 642p.

Arlen Electrical

Reduced losses of £148,700, compared with £166,900, are reported by Arlen Electrical in the six months to September, 1984.

Turnover of this Berkshire-based group, engaged in the manufacture of fluorescent control gear and accessories together with electrical accessories and plastic components, fell during the period from £4.98m to £3.3m. First half figures are usually affected by low sales in the summer and the directors say the company is trading profitably in the current half.

Redundancy costs and factory closedown were reflected in an extraordinary debit of £48,900. Losses per share emerged at 2.4p (2.7p).

DJ Security

D.J. Security Alarms saw its taxable profits fall from £210,000 to £99,000 in the year to end-October 1984 on turnover ahead by £138,000 at £778,000.

A final dividend of 0.3p is being paid by this security alarms installer which came to the USM market in September 1983. This makes a total of 1.3p (1p) for the year.

Net earnings per 10p share were shown as 2.83p (5.67p) fully diluted, and 9.4p (33.62p) undiluted.

There was a tax credit of £14,000 this time against a £17,500 charge.

Jayplant

On turnover up from £1.51m to £1.61m, taxable profits of Jayplant, plant hire contractor quoted on the USM, slipped to £39,000 for the year ended May 31, 1984, compared with £44,000. The company, however is paying an initial dividend of 0.25p. Earnings per 25p share were shown as 1.32p, against 1.53p after a tax credit of £8,000 (£10,000).

The pre-tax figure comprised: main hiring business £96,294 profit; Bristol fork-lifts £20,312 loss; property company £1,343 profit.

Falcon Industries buying Plantpak via 9.8m issue

Falcon Industries, the system builder, engineering and tool group, plans a 50 per cent expansion of its equity to finance the £4.3m purchase of Plantpak, a plant pot manufacturer.

Mr Michael Hindmarch, the controlling shareholder and chairman of Plantpak, will join Falcon's board as an executive director. Falcon's chairman is company "doctor" Mr Ronnie Aitken, and Mr Terry Leece is managing director.

Falcon will issue 9.8m new shares, 33 per cent of the expanded capital, as well as £900,000 of loan notes. The vendors, Mr and Mrs Hindmarch, will retain 4.06m shares, 14 per cent of Falcon, and the remaining 5.74m are being placed at 35p each. Brown Shipley is underwriting the vendor placing and Fiske & Co are brokers.

Falcon said Plantpak is a market leader in the UK and exports to over 20 countries, but that its sales could be increased through wholesale and retail outlets in which Falcon's Jenks & Cattell and Burgon & Ball are strong. Both companies make garden tools.

About three-quarters of Plantpak's sales go to commercial growers. Pre-tax profits were £495,000 in 1984 on turnover of £3m.

Falcon said its own performance in 1984 had been adversely affected by the dry summer and the miners' strike, but that the prospects for 1985 were encouraging. The company plans a 1p final dividend, making 2p for the year, unchanged on 1983.

The acquisition of Plantpak is subject to shareholder approval.

Scottish Widows lifts bonus

Scottish Widows' Fund and Life Assurance Society, a leading Scottish life company, has announced a substantial increase in its rates of terminal bonus paid on claims, the increase being backdated to January 1, 1985.

On assurance contracts, the new scale ranges from 47 per cent for 10 year terms to 86 per cent for 40 years compared with the previous scale of 35 per cent to 68 per cent. On pension contracts, the new scale ranges from 54 per cent to 86 per cent against 42 per cent to 68 per cent.

The Society points out that the improvements were possible because of the favourable changes in the investment conditions since the previous review in November 1984.

Powerline beats target and growth continuing

The profit forecast at Powerline International was beaten by £300,000, with pre-tax profits of £1.52m for 1984. This compares with £547,000 in 1983.

The Reading-based electric power supplies and technical publicity company came to the Unlisted Securities Market in March 1984.

A final dividend of 0.8p per 5p share is proposed, making a total of 1.4p net. No dividend payment was made in 1983.

Regarding the current year, trading in the first two months has advanced considerably throughout the group, Mr Derrick Taylor, the chairman says and added that the power supplies distribution business in particular, is progressing well and our recent acquisition of Newtech has exceeded expectations both in profit and growth terms.

The directors look forward to "an extremely good year" in 1985.

Trading profits jumped from £539,000 to £1.39m, on turnover of £6.11m (£4.17m).

Pre-tax profits included income from shares in associates amounting to £18,000 (£41,000) and interest receivable of £131,000 (£2,000). Pre-tax profits comprised distribution and manufacturing of electronic equipment £1.2m and advertising and public relations of £316,000.

Net profits were struck at £809,000 against last year's £293,000 after tax of £714,000 (£254,000). Earnings per 5p ordinary share are stated at 6.84p against 2.7p.

BANK RETURN

	Wednesday February 27 1985	Increase (+) or Decrease (—) for week
BANKING DEPARTMENT		
Liabilities	£	£
Capital	14,553,000	—
Public Deposits	4,405,694,556	— 660,916,540
Bankers Deposits	724,632,752	+ 52,214,649
Reserve and other Accounts	1,665,954,856	— 5,885,424
	6,810,826,120	— 616,557,310
Assets		
Government Securities	071,259,854	+ 117,616,625
Advance & other Accounts	968,551,906	— 52,162,820
Premises Equipment & other Secs.	5,241,898,017	— 882,465,678
Notes	6,896,705	+ 4,416,476
Coin	241,638	+ 12,792
	5,610,826,120	— 612,687,515
ISSUE DEPARTMENT		
Liabilities	£	£
Notes issued	12,000,000,000	+ 20,000,000
In circulation	11,991,103,295	+ 15,587,528
In Banking Department	6,896,705	+ 4,412,472
Assets		
Government Dept	11,015,100	—
Other Government Securities	1,962,610,699	— 478,146,077
Other Securities	10,026,365,201	+ 498,146,277
	12,000,000,000	+ 20,000,000

FINANCIAL TIMES STOCK INDICES

	Mar. 1	Feb. 28	Feb. 27	Feb. 26	Feb. 25	Feb. 22	1984/85 High	1984/85 Low	Since Compilation High	Since Compilation Low
Government Secs.	80.17	80.55	80.29	79.29	79.52	79.32	85.77	75.72	127.4	49.18
Fixed Interest	83.39	85.75	83.71	83.17	82.98	83.60	87.48	80.45	150.4	50.53
Ordinary	975.0	979.9	980.2	975.0	968.0	975.2	1024.5	755.3	1024.5	49.4
Gold Mines	476.5	465.5	468.1	448.7	441.4	466.2	711.7	439.5	734.7	43.5
FT-Act.All.Share	605.82	608.13	608.49	607.91	606.89	611.11	627.28	464.84	627.28	61.22
FT-SE100	1250.8	1259.7	1258.8	1259.5	1059.4	1266.0	1305.7	986.0	1305.7	986.0

RECENT ISSUES

EQUITIES

Issue price	Amount paid up	Latest Renunc. date	1984/85 High	1984/85 Low	Stock	Closing price	+ or —	Net Div.	Times covered	Gross Yield	P/E Ratio
100	F.P.	8/3	136	124	Alexandra Work. 10p	137	+0	bg4.5	2.5	4.7	12.5
§10	F.P.	8/2	14½	19	*B'nnett&Fount'n10p	16½	—	bg0.42	1.6	4.4	18.7
180	F.P.	8/3	152	161	Berkeley Technology	158	+5	bQ5.7c	1.6	4.4	14.5
§90	F.P.	1/3	145	112	*Bluebird Toys 10p	140	—	u3.1c	2.3	3.2	18.7
§105	F.P.	13/3	106	96	*Cons. Tern. Invs.20p	98	—	ud5.0	2.0	7.3	[illegible]
‖	F.P.	—	127	120	Cullen's Hldgs 10p	122	—3	—	—	—	—
100	F.P.	00/3	104	101	German Small Units	104	+1	—	—	—	—
¶145	F.P.	14/3	180	155	Hillsdown Hldgs. 10p	163	—2	bgd3.5	2.7	3.1	14.2
‖	F.P.	—	325	255	*Memcom Intl. 10p	265	—	4.5	4.1	2.0	18.4
§55	F.P.	6/0	57	45	*Optometrics(U.S.A.)	45	—	Q9c	—	3.8	—
§125	F.P.	—	218	190	*Osborne & Little 5p	195	—2	bq2.0	3.2	1.5	29.9
100	75	1/3	84½	77	Pacific Assets Tst.50p	84	—	—	—	—	—
¶¶	F.P.	—	80	80	P.&O. Warrants	80	—	—	—	—	—
‖	F.P.	—	46½	37	*Sangem	45xa	—1	—	—	—	—
§128	F.P.	—	159	148	*Sims Catering 5p	148	+2	bg3.7	2.1	3.6	17.2
§68	F.P.	13/2	108	82	*Spafax Television	105	—5	b2.0	2.9	2.5	18.7
§174	F.P.	1/3	225	200	*Synapse Comp'r. 5p	215	—	bgd1.5	3.1	1.0	28.1

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1984/85 High	1984/85 Low	Stock	Closing price £	+ or —
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	African Dev. Bank 11¼% Ln. 2010	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Beazer (C.H.) 5½% Uns. Ln. 2000	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Folkestone Dock Prf. Units	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Greycoat Offices	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Int.-Am. Dev. Bk. 9¼% Ln. 2015	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Lon. Shop Prop. 11¼% Mort. Deb. 2015	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Mid-Sussex Wtr.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Mountleigh 9% Conv.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Nationwide Bldg. Soc.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P. & O. 6.5% Conv. Red. Prf.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Pleasurama 7% Cnv. Red. Prf.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Polly Peck Intl. 9% Cv. Un. Ln. '05-08	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Sangers 11% Cnv. Uns. Ln. 94/09	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Shires Inv. Units	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spain (Kingdom of) 11¼% Ln 2010	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Swedish 11% Ln. 2012	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tricentrol 11¼% Cnv. Uns. Ln. 95/00	[illegible]	[illegible]

"RIGHTS" OFFERS

Issue price	Amount paid up	Latest Renunc. date	1984/85 High	1984/85 Low	Stock	Closing price	+ or —
39	[illegible]	[illegible]	[illegible]	[illegible]	Barrow Hepburn	[illegible]	[illegible]
370	[illegible]	[illegible]	[illegible]	[illegible]	Bunzl	[illegible]	[illegible]
566	[illegible]	[illegible]	[illegible]	[illegible]	DPCE 5p	[illegible]	[illegible]
86	[illegible]	[illegible]	[illegible]	[illegible]	First Castle 10p	[illegible]	[illegible]
121	[illegible]	[illegible]	[illegible]	[illegible]	Lyle Shipping Prefd. 5p	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	McCorquodale	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	Newman-Tonks	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	New Tokyo Inv. Tst. 50p	[illegible]	[illegible]
36	[illegible]	[illegible]	[illegible]	[illegible]	Premier Cons. 5p	[illegible]	[illegible]
66	[illegible]	[illegible]	[illegible]	[illegible]	Pressac Entertainments 50p	[illegible]	[illegible]
650	[illegible]	[illegible]	[illegible]	[illegible]	R.E.A. Hldgs. Units	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	Renold	[illegible]	[illegible]
010	[illegible]	[illegible]	[illegible]	[illegible]	Royal Bank of Scotland	[illegible]	[illegible]
560	[illegible]	[illegible]	[illegible]	[illegible]	Samuelson Grp.	[illegible]	[illegible]
35	[illegible]	[illegible]	[illegible]	[illegible]	Sangers	[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]	[illegible]	Southwest Res. 40p	[illegible]	[illegible]
435	[illegible]	[illegible]	[illegible]	[illegible]	Systems Designers 5p	[illegible]	[illegible]
121	[illegible]	[illegible]	[illegible]	[illegible]	Westwood Dawes 'B' 10p	[illegible]	[illegible]

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimates. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. g Assumed dividend and yield. u Forecast dividend cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1985. H Dividend and yield based on prospectus or other official estimates for 1984. [illegible]

PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus*) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

	Date	Announcement last year		Date	Announcement last year
*Anglo Amer. Gold	Mar 6	Final 525 cts	*Kleinwort Benson	Mar 12	Final 7.5
Assoc. Brit. Ports	Apr 4	Final 5.5	Ladbroke	Mar 28	Final 4.945
Automotive Products	Mar 20	Final 0.5	*Laing	Mar 13	Final 7.0
BAT Inds	Mar 27	Final 4.875	Legal and General	Mar 28	Final 12.5
*BICC	Mar 27	Final 7.04	*Lex Service	Mar 26	Final 6.0
*BP	Mar 7	Final 7.0	*Low & Bonar	Mar 11	Final 4.8
BTR	Mar 14	Final 4.5	Lucas Inds	Mar 29	Interim 2.5
Babcock Intl.	Mar 28	Final 4.3	*Midland Bk.	Mar 8	Final 14.5
*Barclays	Mar 7	Final 12.0	Mills and Allen Intl.	Mar 19	Interim 4.0
*Barratt Devs	Mar 19	Interim 2.31	*Mitchell Cotts	Mar 15	Final 19.8
*Bejam	Mar 11	Interim 1.75	*NatWest	Mar 8	Interim 0.5416
*Boddingtons Brews.	Mar 19	Final 1.3	News Intl.	Mar 5	Final 6.85
*Bowater	Mar 21	Final 4.25	Ocean Transport	Mar 21	Final 2.35
*Bmar Chems.	Mar 26	Final 3.5	Phoenix Assur.	Apr 4	Final 12.2
Brit. Aerospace	Mar 27	Final 5.5	Provident Financial	Mar 8	Final 6.0
Brit. Car Auction	Mar 21	Interim 1.1	*Prudential	Mar 6	Final 10.4
*British Vita	Mar 4	Final 4.5	Queens Moat Houses	Apr 4	Final 0.885
*Bristol	Mar 21	Final 6.7	*Ransomes Sims and Jefferies	Mar 4	Final 10.0
Bunzl	Mar 12	Final 3.0	Reckitt and Colman	Mar 27	Final 7.85
Burton	Mar 20	Interim 2.0	Rockware	Mar 27	Final nil
*Cadbury Schweppes	Mar 27	Final 3.9	*Rowntree Mackintosh	Mar 14	Final 6.55
Cape Inds.	Mar 27	Final 3.9	*Royal Dutch	Mar 14	Final 11.0
Cement Roadstone	Mar 14	Final 1.5	*Royal Insce.	Mar 14	Final 13.0
Coats Prot.	Apr 3	Final 2.0	Scottish Heritable Tst.	Mar 29	Final 1.1
Combined Eng. Stores	Mar 28	Final 2.01	Sedgwick	Mar 15	Final 5.25
*Commercial Union	Mar 7	Final 5.95	*Shell Transport	Mar 14	Final 16.6
*Cons. Gold Fields	Mar 5	Interim 8.5	*Sime Darby	Mar 6	Interim 4 sen
*Consolidated Plantations	Mar 7	Interim 8 sen	Slough Ests.	Mar 28	Final 2.475
*Comb	Mar 7	Final 2.2	Smith & Nephew	Mar 20	Final 3.1
Croda Intl.	Mar 29	Final 4.0	Standard Chartered Bk.	Mar 27	Final 16.5
*DRG	Mar 27	Final 3.5	Steetley	Mar 13	Final 7.0
*De Beers	Mar 12	Final 25c	Sun Alliance	Apr 4	Final 45.0
*Delta	Mar 28	Final 1.93	*TI	Mar 14	Final 7.6
Eastern Prod.	Mar 28	Final 3.0	*Transport Dev.	Mar 28	Final 3.5
Esso Intl.	Mar 26	Final 4.0	Tricentrol	Mar 22	Final 7.2
*Fisons	Mar 26	Final 8.0	*Turner & Newall	Mar 22	Final 0.75
*GKN	Mar 13	Final 6.0	*Ultramar	Mar 13	Final 11.0
GRE	Apr 4	Final 18.25	*Unilever	Mar 5	Final 20.29
*General Accident	Mar 6	Final 11.0	United Biscuits	Mar 19	Final 4.3
*General Mining	Mar 7	Final 135 cts	United Newspapers	Mar 21	Final 9.0
Glynwed	Apr 5	Final 8.4	Wills Faber	Mar 21	Final 1.76
Hawks Queensway	Mar 29	Final 4.76	*Wolseley-Hughes	Mar 6	Interim 5.35
Hepworth Ceramic	Mar 21	Final 3.8	Woolworth	Mar 22	Final 6.0
*Hickson Intl.	Mar 22	Final 4.0	*Yorks. Chems.	Mar 12	Final 1.25
*Higgs & Hill	Apr 4	Final 5.0			
*HK & Shanghai Bank	Mar 12	Final 80.37			
Horizon Travel	Mar 14	Final 4.457			
*IMI	Mar 28	Final 2.6			
*Ibstock Johnsen	Mar 29	Final 0.75			

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

Clerical Medical

15 St. James's Square, SW1Y 4LQ. 01-930 5474

Executive Investment Pension Plan

	Bid	Offer	Change
Cash Fund	116.0	122.2	+0.3
Mixed Fund	147.1	154.9	−0.5
Fixed Interest Fund	117.4	123.6	−0.4
UK Equity Fund	159.0	167.4	−1.8
Property Fund	112.8	118.8	+0.1
Overseas Fund	177.1	186.5	+3.6
Index Linked Fund	102.7	108.2	−0.8
Stock Exchange Fund	119.8	126.2	−0.3
North American Fund	117.3	123.5	+1.4
Far East Fund	108.5	114.3	+3.4
Special Situations Fund	108.9	114.7	+0.1

Prices February 27 Unit dealings on Wednesday

Clerical Medical Managed Funds Limited

	Bid	Offer	Change
Cash Fund	143.0	143.0	+0.3
Mixed Fund	213.5	218.8	−0.7
Fixed Interest Fund	184.1	188.9	−0.6
UK Equity Fund	232.5	239.5	−2.6
Property Fund	128.9	134.7	+0.1
Overseas Fund	262.6	275.7	+5.3
Index Linked Fund	116.5	118.2	−0.8
Stock Exchange Fund	123.5	128.6	−0.3

Prices February 27 Unit dealings on Wednesday
Initial unit prices available on request; telephone 0272 290566

UK COMPANY NEWS

Mann & Co tender offer at 125p

BY ALISON HOGAN

MANN & CO, one of the UK's largest residential estate agents, is coming to the market through an offer for sale of 6.66m shares at a minimum tender price of 125p which capitalises the whole company at £25m.

Mann has expanded its network of offices from 11, when it opened in 1891, to 120, based mainly in the Home Counties.

The houses it sells fall mainly in the £30,000 to £75,000 price range. The company charges a commission to the vendor usually of 2½ per cent or 2 per cent when it is sole agent.

Mann has evolved other services related to house sales including letting and surveying, management and some commercial property. It provides a corporate relocation service to businesses which involves a guaranteed purchase scheme for employees on the move.

The biggest single service other than house agency that the company offers is in the area of insurance and financial services. This was started in 1981, and contributed £438,000 of the £1.28m trading profit in the year to May 1984. The basis of the business is mortgage finanee, but range to cover house contents, life assurance and pensions funds.

Since 1977, the company has boosted growth, through setting up associated partnerships between senior managers and Mann on a 50:50 basis. The managers bave been free to develop

their own businesses in areas where Mann is not already trading, having the benefit of an established name behind them. Today 38 of the 120 offices in the group are operated by such partnerships.

Mr Jeremy Agace, cbairman of Mann, said that he expects the group to expand by setting up further associated partnerships Mann intends to expand the as well as opening offices of its own and by acquisition.

It will receive around £3m from the issue which will be used for future expansion.

The directors expect the company to make £2m pre-tax in the year to May. This rises to £3m on the basis of pro-forma accounts which take into account a full year of lower directors' remuneration following the cuts made in preparation for going public.

The group has shown a fairly steady increase in turnover and pre-tax profits although there was a slight dip in the year to May 1984 which Mr Agace said was due to some management changes and high mortgage rates.

At the minimum tender price of 125p, the shares sell on e prospective p/e of 12.6 times based on a 42 per cent tax charge. The yield is 4 per cent.

Morgan Grenfell are financial advisers to the company and Rowe & Pitman are brokers.

The offer for sale closes on Thursday, March 7, to be followed as soon as possible by details of the striking price and basis of allocation. Dealings are expected to begin on Wednesday, March 13.

● comment

Based strongly in stockbroker land, Mann is well positioned to be able to charge a high commission for good service. Its customers are probably amongst the least resistant to price rises of any region in the country. Its aim is to more than double the number of offices from the current 120, though chairman, Jeremy Agace, will not be drawn on how long the expansion might take. There seems considerable potential for expansion in the financial services side, but Mann has no plans to take on solicitors by conveyancing. Profits from the associated partnerships should start showing an improvement as the rate of capital spending on new offices slows down. All in all it is a very well run group of house agents which probably deserves some premium over the existing quoted companies—Bairstow Eves and Connells, presently on historie pe's a little under 15. The smallness of the issue may well push up the price, particularly if the stags start filing dozens of small applications at various levels, so a striking price of 145p to 150p seems quite possible.

Derek Crouch doubles to £1.8m

DOUBLED pre-tax profits of £1.76m against £886,000 were achieved at Derek Crouch for the year to end-Decembe,r 1984.

An increased final dividend of 3.762p (3.42p) is being paid, bringing the total for the year to 5.39p compared with 5.05p. Net earnings per 20p share were shown higher at 14.5p (2.6p) and the directors are confident that they can look to 1985 with some optimism.

Turnover of this Peterborough-based group, which has interests in open-cast mining, building construction, civil engineering and property development, moved ahead during 1984 from £61.12m to £65.46m, generating a slightly increased operating profit of £2.48m (£2.42m).

The U.S. subsidiary, Power Inc., contributed £828,000 to operating profits, resulting in a net profit of £131,000.

Although this company benefited from a small increase in coal prices the directors say that as the threatened UMW strike did not materialise it left many of the utilities overstocked. This led to a softening of the market price towards the end of the year, a trend expected to continne through much of 1985. Production will be geared to maintain the profitable position achieved.

At Derek Crouch (Contractors), which deals with the company's UK mining and coal eleaning operations, the directors say that satisfactory results were again produced. The replacement programme for earthmoving and ancillary equipment was continued during 1984, which helped to maintain the company's competitiveness, they add.

After careful monitoring of the depressed market for the sale of construction industry-related equipment, which shows no real signs of improvement, the directors of Derek Crouch (Sales) decided to cancel agency arrangements in this sector during 1984.

Derek Crouch (Constructiou) incurred a loss during the year, although on a much reduced scale, and, according to the directors, the company's diversification into private development is progressing satisfactorily.

The complex claim involving a large hospital contract, which the chairman mentioned in his 1983 report, did not reach arbitration during 1984. The natnre and extent of the dispute now sugegsts that unless a negotiated settlement can be achieved, arbitration proceedings are unlikely to progress before 1986.

Courtney Pope growth

Courtney, Pope, a shopfitting and electrical company showed interim taxable profits moving ahead by 38 per cent from £580,000 to £800,000. The group, lifted turnover by £4.09m from £17.95m to 22.04m in the half year to November 30, 1984.

The interim dividend is stepped up from 2p to 3p

As regards the year as a whole, Mr D. H. Peacock, the group chairman states that the order books at this time are satisfactory and the group is looking 1o make an improved result.

During the half year under review, the engineering and specialist contracting divisions are currently prodncing ebudgeted results, with more support and attention at this time being given to the electrical division,

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Over-the-Counter Market

Capitalisatn. £000's	Company	Price	Change on week	Gross div.(p)	Yield %	P/E Actual	P/E Fully taxed
4,866	Ass. Brit. Ind. Ord.	142	—	6.8	4.4	7.8	9.4
—	Ass. Brit. Ind. CULS	150	—	10.0	8.8	—	—
3,242	Airsprung Group	58	+ 1	5.4	11.4	6.2	7.4
875	Armitage & Rhodes	35	—	2.9	8.3	4.4	7.3
44,570	Bardon Hill	143	+ 1	3.4	2.4	14.4	24.0
2,585	Bray Technologies	47	—	3.5	7.4	5.6	7.8
1,970	CCL Ordinary	170	—	12.0	7.1	—	—
—	CCL 11pc Conv. Pref.	110	—	15.7	13.8	—	—
5,813	Carborundum Ord.	570	+20	5.7	0.7	—	—
—	Carborundum 7.5pc Pf.	85	—	10.7	12.4	—	—
680	Cindico Group	435	—	—	—	—	—
4,289	Deborah Services	55xd	− 1	6.5	11.8	5.2	6.5
19,433	Frank Horsell	302	+ 7	—	—	12.1	15.9
—	Frank Horsell Pr Ord 87	261	+ 4	8.5	3.7	10.5	13.7
4,048	Frederick Parker	28	—	—	—	—	—
1,033	George Blair	56	+ 2	—	—	3.8	7.5
1,137	Ind. Precision Castings	28	− 1	2.7	9.8	7.8	8.3
14,231	Isis Group	186	—	15.0	8.0	7.4	13.4
5,468	Jackson Group	104	− 1	4.9	4.7	4.8	8.4
37,182	James Burrough	268	− 2	13.7	5.1	9.5	9.5
2,981	James Burrough 9pc Pf	86xd	—	12.8	15.0	—	—
6,858	John Howard & Co.	85	− 2	5.0	5.9	8.7	12.3
3,260	Linguaphone Ord.	170	+ 2	—	—	—	—
—	Linguaphone 10.5pc Pf	95	—	15.0	15.8	—	—
18,670	Minihouse Holding NV	612	—	3.8	0.8	44.0	48.2
408	Robert Jenkins	40	+ 2	8.0	12.5	—	—
1,320	Scruttons "A"	32	—	5.7	17.8	18.8	3.9
1,904	Torday and Carlisle	78	—	—	—	8.4	17.7
1,677	Trevian Holdings	370	—	4.3	1.2	21.0	20.7
4,082	Unilock Holdings	26	− 1	1.3	5.0	12.6	18.2
12,025	Walter Alexander	94xd	− 2	7.5	7.8	8.3	11.3
5,227	W. S. Yeates	224	—	17.4	7.7	5.4	10.7

S=Suspended.
Prices and details of services now available on Prestel, page 48146

Closing prices, March 1

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
23½	16⅛	AAR	.48	2.3	19	23	21¼	21	21	
23½	9⅝	AGS			11	76	14¾	14	14	−1
16¼	11	AMCA				9	11⅛	11⅛	11½	−½
17⅞	13½	AMF	.50	2.9	38	1268	17⅜	17	17¼	+⅜
41⅞	24¼	AMR			10	11761	u43¼	41⅛	40	+1¼
20¼	16¼	AMR pf2.18		11.		8	20⅛	20⅛	20⅛	
14¼	8½	APL			3	4	10⅝	10⅝	10⅝	
69¾	44⅜	ASA	2	4.2		354	47½	46¾	47⅝	+⅝
27	16	AVX	.32	1.3	15	60	24⅛	23¾	24	
48	36¾	AbtLab	1.20	2.5	15	2254	48⅞	47¾	48½	+⅝
25⅞	15½	AccoWds	.44	1.9	19	54	24⅛	24	24½	+⅝
23¼	12½	AcmeC	.40	2.2		181	18¾	18⅜	18½	+⅛
10¾	6¼	AcmeE	.32b	3.2	12	13	10	9⅞	10	+⅛
17⅜	15	AdaEx	2.11e	13.		120	16⅞	16⅜	16⅜	+⅛
20	11⅞	AdmMl	.32	1.6	6	22	19⅞	19¾	19⅞	+¼
18½	8⅝	AdvSys	.81t	7.9	18	354	11¾	11¼	11⅝	−⅛
41⅛	25⅛	AMD			14	3843	34	33¼	33½	+¼
12¾	6⅞	Advest	.12	1.1		2906	11¾	10⅝	11¼	+½
14⅝	9¾	Aeriflex			13	12	13⅞	13⅝	13⅝	−¼
42⅝	27¼	AetnLf	2.64	6.2	41	2666	42⅝	41⅛	42¼	+⅝
56¾	52⅝	AetL	pf5.83e	10.		9	55¾	55⅛	55⅝	
32½	18⅝	Ahmns	1.20	4.4	16	1537	28¼	27½	27½	−⅛
4⅞	2⅝	Aileen			30	32	3	3	3	
51	36	AirPrd	1.20	2.4	11	440	49⅝	48⅛	49⅝	+¼
24⅜	18	AirbFrt	.60	2.5	13	60	24¼	23⅝	23⅝	−¾
2	⅞	AlMoa s			25	60	1⅞	1¾	1¾	
33	26¾	AlaP	pfA3.92	13.		13	31	31	31	
7½	6	AlaP	dpf.87	12.		26	7½	7¼	7⅜	+⅛
63	56	AlaP	pf 8.28	12.		z300	67¼	67¼	67¼	−¾
13⅜	19⅞	Alagsc s	.92	7.2	11	10	12¾	12¾	12¾	−⅛
18⅜	9¼	AlskAir	.14	.7	0	897	10⅝	19	10½	+⅜
18¼	19½	Albrto s	.38	2.6	18	38	14¾	14½	14½	−½

Continued on Page 27

AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing prices, March 1

Continued on Page 28

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Continued from Page 26

X Y Z

48¼	33¼	Xerox	3	6.5	19	3949	46⅛	45⅝	45⅞	+⅛
51⅜	45¼	Xerox pf5.45		11.		1099	49⅞	49½	49½	−⅜
60	24	ZaleCp 1.32		4.6	9	53	29⅝	29¼	29⅜	
24⅞	14½	Zapata .84		3.4	16	940	15⅝	15⅜	15½	
58	30	Zayre .40b		.7	15	1246	57¾	56¼	57	+⅝
51¼	18⅛	ZenithE			8	2194	22⅞	22⅛	22⅝	
27¼	18	Zero .40		1.5	18	15	26¼	25⅞	26¼	+⅛
21⅛	20½	Zero wi				4	21⅛	21⅛	21½	
31⅜	21⅛	Zurnin 1.32		4.4	11	239	30⅛	29½	30⅛	+¼

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a–dividend also extra(s). b–annual rate of dividend plus stock dividend. c–liquidating dividend. cld–called. d–new yearly low. e–dividend declared or paid in preceding 12 months. g–dividend in Canadian funds, subject to 15% non-residence tax. i–dividend declared after split-up or stock dividend. j–dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k–dividend declared or paid this year, an accumulative issue with dividends in arrears. n–new issue in the past 52 weeks. The high-low range begins with the start of trading. nd–next day delivery. P/E–price-earnings ratio. r–dividend declared or paid in preceding 12 months, plus stock dividend. s–stock split. Dividends begins with date of split. sls–sales. t–dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u–new yearly high. v–trading halted. vi–in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd–when distributed. wi–when issued. ww–with warrants. x–ex-dividend or ex-rights. xdis–ex-distribution. xw–without warrants. y–ex-dividend and sales in full. yld–yield. z–sales in full.

WORLD STOCK MARKETS

OVER-THE-COUNTER

Nasdaq national market, closing prices, March 1

Stock	Sales (Hnds)	High	Low	Last	Chng
[illegible]					

Continued on Page 29

CANADA

TORONTO

Closing prices March 1

Sales	Stock	High	Low	Close	Chng
[illegible]					

MONTREAL

Closing prices March 1

Sales	Stock	High	Low	Close	Chng
[illegible]					

AMERICAN STOCK EXCHANGE CLOSING PRICES

Continued from Page 27

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]										

AUSTRALIA

1984/85 High	Low	Mar. 1	Price Aust. $
5.23	4.27	ANZ Group	4.88
1.09	0.50	Alliance Oil Dev.	1.95
2.11	1.40	Ampol Pet.	1.78
1.05	0.75	Ashton	6.2
2.0	1.65	Aust. Cons. Ind.	1.93
3.4	2.36	Aust Guarantee	8.8
2.72	1.90	Aust. Nat. Inds.	2.55
2.67	1.80	Aust. Paper	9.65
6.40	9.90	Bell Group	6.9
8.90	5.50	Bell Res.	6.2
1.72	1.15	Bond Corp Hldgs	1.55
4.05	9.62	Boral	5.23
2.72	1.42	Bougainville	1.95
5.86	2.50	Brambles Ind.	3.7
4.62	2.05	Bridge Oil	2.17
6.08	4.88	B.H. Prop.	6.58
8.20	4.46	CRA	6.76
4.25	2.68	CSR	2.82
5.56	4.08	Castlemaine Tys	4.68
4.24	9.50	Coles (G.J.)	5.65
5.22	2.90	Comalco "A"	2.85
1.30	0.37	Consolidated Pet	6.45
1.8	1.16	Costain Aust.	1.5
2.35	1.45	Dunlop Aust.	2.28
3.53	2.36	Elders IXL	3.1
1.80	1.30	Energy Res.	1.48
2.40	1.66	Gen. Prop. Trust	2.18
3.25	2.88	Hardie (James)	3.21
3.3	1.26	Hartogen Energy	2.17
4.55	2.96	Herald W'y Times	4.0
9.96	1.76	ICI Aust.	1.95
9.48	0.18	Jimberlana F.P.	0.27
9.90	6.1	Kiaora Gold	6.13
6.6	4.50	Lend Lease	8
3.90	9.22	MIM	2.5
4.86	2.12	Mayne Nickless	9.2
2.16	1.58	Myer Emporium	1.82
[illegible]			

HONG KONG

1984/85 High	Low	Mar. 1	Price H.K.$
29.7	17.8	Bank East Asia	24.8
14.5	5.15	Cheung Kong	14
15.1	7.5	China Light	14.5
4.56	1.16	Evergo	1.47
49.25	25.2	Hang Seng Bank	47.25
8.05	5.05	HK Electric	7.5
6.7	2.76	HK Kowloon Wh.	6.75
5.16	2.62	HK Land	6.15
9.3	5.8	HK Shanghai Bk.	8.85
66.5	95.6	HK Telephone	64
21.4	8.4	Hutchison Wpa.	96.8
14.6	6.6	Jardine Math.	16.1
6.05	2.25	New World Dev.	5.2
9.87	1.26	Orient O'seas	2.5
4.0	2.02	O'seas Trust Bnk	2.72
9.7	4.12	SHK Props.	8.3
2.60	1.44	Shell Elect.	1.76
26.6	12.9	Swire Pac A.	83.8
6.6	9.66	TV-B	5.96
7.4	2.86	Wheel'k Mard A.	7.25
2.3	1.16	Wheel'k Maritme.	1.15
2.6	1.37	World Int. H'ldgs	1.78

JAPAN

1984/85 High	Low	Mar. 1	Price Yen
1,279	960	Ajinomoto	1,090
2,860	1,830	Alps Electric	2,300
1,416	986	Amada	1,236
826	406	Asahi Chem.	870
[illegible]			

FRANCE

1984/85 High	Low	Mar. 1	Price Frs.
1,999	1,545	Emprunt 4½% 1973	1,646
19,920	7,565	Emprunt 7% 1973	7,678
264.6	902	Accor	259
635	497	Air Liquide	630
608	375	BIC	657
1,995	1,416	Bongrain	1,540
836	560	Bouygues	640
2,885	9,950	BSN Gervais	2,420
1,334	1,012	CIT Alcatel	1,250
1,970	1,005	Carrefour	1,895
1,261	774	Club Mediter.	1,185
618	427	Cie Bancaire	577
270	267	Cofimeg	256
2,448	2,170	Damart	2,300
1,232	780	Darty	1,215
941	685	Dumez S.A.	619
598	486	Eaux (Cie Gen.)	546
278	179	Elf-Aquitaine	242
3,620	2,186	Essilor	2,945
792	537	Gen. Occidentale	765
97.4	63.2	Imetal	84.8
455.6	300	Lafarge-Coppee	417
2,600	2,161	L'Oreal	2,409
2,340	1,778	Legrand	2,075
957	148	Maisons Phenix	209.5
2,050	1,300	Matra S.A.	1,620
1,684	725	Michelin B	839
2,616	1,372	Midi (Cie)	2,277
1,985	1,316	Moet-Hennessy	1,910
140.5	82.5	Moulinex	112
81.6	45.7	Nord Est	80.8
845	662	Pernod Ricard	725
574	455	Perrier	539
513	184.5	Petroles Fra.	263
290.5	179.6	Peugeot S.A.	270
205.8	190.2	Printemps (Au.)	199
[illegible]	196.9	Radiotech	262.8
[illegible]			

ITALY

1984/85 High	Low	Mar. 1	Price Lire
[illegible]			

NETHERLANDS

1984/85 High	Low	Mar. 1	Price Fls
[illegible]			

SWEDEN

1984/85 High	Low	Mar. 1	Price Kronor
[illegible]			

NORWAY

1984/85 High	Low	Mar. 1	Price Kroner
[illegible]			

DENMARK

1984/85 High	Low	Mar. 1	Price Kr. %
[illegible]			

SINGAPORE

1984/85 High	Low	Mar. 1	Price $
[illegible]			

SWITZERLAND

1984/85 High	Low	Mar. 1	Price Frs.
[illegible]			

SOUTH AFRICA

1984/5 High	Low	Mar. 1	Price Rand
[illegible]			

SPAIN

1984/5 High	Low	Mar. 1	Price Pta %
[illegible]			

AUSTRIA

1984/85 High	Low	Mar. 1	Price %
[illegible]			

GERMANY

1984/85 High	Low	Mar. 1	Price Dm
[illegible]			

BELGIUM/LUXEMBOURG

1984/85 High	Low	Mar. 1	Price Frs.
[illegible]			

NOTES:—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

WORLD STOCK MARKETS

OVER-THE-COUNTER

Continued from Page 28

Stock	Sales (Hnds)	High	Low	Last	Chng
[illegible]					

H · I · J · K · L · M · N · O · P · Q · R · S · T · U · V · W · X Y Z

Indices

NEW YORK — DOW JONES

	Mar. 1	Feb. 28	Feb. 27	Feb. 26	Feb. 25	1984-85 High	1984-85 Low	Since Compiltn High	Since Compiltn Low
Industrl's	1299.36	1284.01	1281.03	1285.11	1277.50	1299.36 (1/3/85)	1086.57 (24/7)	1299.36 (1/3/85)	41.22 (2/7/32)
H'me Bnds	72.68	72.66	72.90	73.02	73.28	74.47 (30/1/85)	64.81 (25/5)	—	—
Transport	635.30	630.98	631.64	631.20	623.34	635.30 (1/3/85)	444.03 (25/7)	635.30 (1/3/85)	12.32 (8/7/32)
Utilities	148.80	146.75	148.08	148.44	148.80	151.18 (15/2/85)	122.25 (15/6)	163.72 (20/4/65)	10.5 (28/4/42)
Trading Vol 000's	140.7	100,720	107,630	114,150	99,740	—	—	—	—

Day's High 1309.96 (1288.32) Low 1282.60 (1271.41)

	Feb. 22	Feb. 15	Feb. 8	year ago (approx)
Industrial div. yield %	4.77	4.73	4.68	4.73

STANDARD AND POORS

	Mar. 1	Feb. 28	Feb. 27	Feb. 26	Feb. 25	1984-85 High	1984-85 Low	Since Comp'n High	Since Comp'n Low
Industr'ls	205.15	202.68	201.97	203.82	200.27	205.15 (1/3/85)	157.74 (24/7)	205.15 (1/3/85)	3.62 (30/6/32)
Comp's'te	183.85	181.10	180.71	181.17	179.23	183.35 (15/2/85)	147.82 (24/7)	185.85 (15/2/85)	4.40 (1/6/32)

	Feb. 29	Feb. 20	Feb. 13	year ago (approx)
Industrial div. yield	3.60	3.61	3.76	4.01
Industrial P/E ratio	11.38	11.34	11.49	10.82
Long Gov. Bond yield	11.83	11.45	11.28	11.98

N.Y.S.E. ALL COMMON

Mar. 1	Feb. 28	Feb. 27	Feb. 26	1984-84 High	1984-84 Low
106.84	104.95	104.66	104.82	106.98 (15/2/85)	85.13 (24/7)

Rises and Falls

	Mar. 1	Feb. 28	Feb. 72
Issues Traded	2,000	1,995	1,998
Rises	1,118	807	744
Falls	479	690	811
Unchanged	402	496	444
New Highs	—	79	73
New Lows	—	3	9

TORONTO

	Mar. 1	Feb. 28	Feb. 27	Feb. 26	1984-85 High	1984-85 Low
Metals & Minerals	2108.7	2075.2	2084.5	2077.8	2524.4 (12/1/84)	1641.0 (25/7)
Composite	2625.20	2584.9	2585.4	2584.7	2628.8 (15/2/85)	2079.7 (24/7)
MONTREAL Portfolio	131.58	130.27	128.82	130.87	130.87 (15/2/85)	100.38 (24/8)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
RCA	3,386,800	40⅜	+1⅜	Safeway	1,532,100	33⅞	+⅜
ATT	2,213,700	21⅝	+⅜	Ford Motor	1,529,500	45⅞	+¼
Am Nat Rcs	1,951,600	53⅜	+4⅝	ITT	1,479,500	30⅝	+¼
Comw Ed	1,634,700	28⅝	—	Phillips Pet	1,444,000	49⅞	+⅜
Pfizer	1,540,000	41⅞	+1⅜	IBM	1,384,300	135⅞	+1⅞

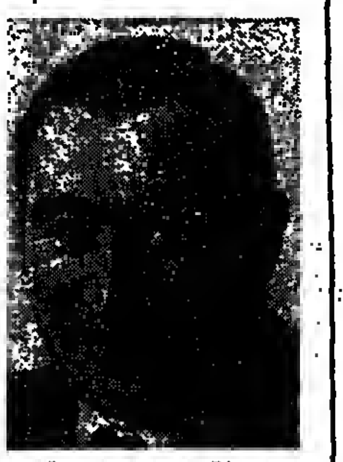
	Mar. 1	Feb. 28	Feb. 27	Feb. 26	1984-85 High	1984-85 Low
AUSTRALIA All ord. (1/1/80)	790.3	792.3	786.8	778.4	798.9 (20/2/85)	546.5 (19/6)
Metals & Minls. (1/1/80)	475.0	480.3	476.2	482.5	567.4 (3/1/84)	385.6 (7/1/85)
AUSTRIA Credit Aktien (2/1/62)	74.50	74.88	74.08	72.85	74.88 (28/2/85)	53.20 (15/8)
BELGIUM Brussels SE (1/1/80)	2252.73	2242.80	2235.86	2285.42	—	—
DENMARK Copenhagen SE (3/1/83)	176.87	175.48	174.81	172.62	225.2 (20/1/84)	158.44 (8/1/85)
FRANCE CAC General (31/12/82)	205.8	201.5	202.5	204.2	205.8 (21/2/85)	156.8 (3/1/84)
Ind Tendance (28/12/84)	109.5	109.8	109.2	110.1	111.2 (21/2/85)	100.0 (28/12/84)
GERMANY FAZ Aktien (31/12/58)	411.42	403.84	402.80	401.34	411.42 (1/3/85)	317.17 (26/7)
Commerzbank (1/12/53)	1196.4	1175.8	1170.8	1164.4	1196.4 (1/3/85)	917.7 (25/7)
HONG KONG Hang Seng Bank (31/7/64)	1401.15	1375.25	1387.82	1402.85	1435.17 (19/2/85)	746.02 (13/7)
ITALY Banca Comm Ital. (1972)	278.85	277.19	278.36	281.71	288.71 (20/2/85)	192.85 (2/1/84)
JAPAN** Nikkei-Dow (16/5/49)	12412.14	12321.9	12287.4	12185.0	12412.14 (1/3/85)	9703.35 (23/7)
Tokyo SE New (4/1/68)	981.31	977.30	976.85	967.02	981.31 (1/3/85)	730.46 (4/1/84)
NETHERLANDS ANP-CBS General (1970)	200.8	199.8	200.1	200.2	206.5 (21/2/85)	148.8 (25/7)
ANP-CBS Indust (1970)	159.2	157.4	158.5	158.1	163.7 (21/2/85)	118.7 (18/6)
NORWAY Oslo SE (4/1/83)	319.19	323.24	326.98	325.99	345.8 (8/2/85)	221.67 (4/1/84)
SINGAPORE Straits Times (1966)	841.20	839.84	835.19	825.57	1071.9 (8/2/84)	784.4 (15/1/85)
SOUTH AFRICA Gold (1958)	—	896.8	885.8	868.8	1099.0 (19/11)	728.1 (24/7/84)
Industrial (1958)	—	865.7	860.4	861.7	1185.3 (26/5)	853.5 (19/6)
SPAIN Madrid SE (28/12/84)	112.70	112.58	115.75	112.90	117.41 (4/2/85)	100.00 (28/12/84)
SWEDEN Jacobson & P (1/1/58)	1484.14	1427.75	1482.19	1429.96	1594.5 (6/2/84)	1302.38 (22/11)
SWITZERLAND Swiss BankCpn. (31/12/58)	417.7	416.7	(u)	418.8	419.3 (21/2/85)	354.5 (26/7)
WORLD Capital Intl. (1/1/70)	—	197.0	196.9	194.8	197.5 (15/2/85)	165.2 (14/12)

** Saturday February 23: Japan Nikkei-Dow 12,171.9. TSE 968.85.

Base value of all indices are 100 except Australian All Ordinary and Metals—500. NYSE All Common—50; Standard and Poors—10; and Toronto Composite and Metals—1,000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ 400 Industrials. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

APPOINTMENTS

Bradford & Bingley chief executive



Mr Geoffrey R. Lister

Mr Geoffrey R. Lister has been appointed chief executive of BRADFORD & BINGLEY BUILDING SOCIETY. He succeeds Mr Robert T. Gardner, who is retiring after 25 years as chief executive. Mr Lister joined Bradford & Bingley in 1965, and was appointed deputy chief executive in 1983.

★

SHELL INTERNATIONAL PETROLEUM has appointed Mr F. W. P. Bentley, supply and marketing co-ordinator, to the board.

★

Mr John B. Hyde, chairman and chief executive of Charterhouse Japhet, has been appointed to the board of ROYAL BANK OF SCOTLAND GROUP.

★

Mr Bastiaan Kardol has been appointed to the board of J. BIBBY and will become chairman on May 21 on the retirement of Sir Leslie Young. Mr Kardol is a director of BARLOW RAND, the South African group which owns 86 per cent of Bibby, and executive chairman of C. G. SMITH. Mr Kardol will resign as chairman of C. G. Smith on becoming J. Bibby's chairman. Mr Kardol has also been appointed executive chairman of Barlow Rand's international division.

★

Mr Brian Margrett has been appointed a director of BSC (INDUSTRY), the job creation division of the British Steel Corporation. Mr Margrett joined BSC (Industry) in 1980, and for the past two years has been regional manager with responsibility for operations in South Wales and the West Midlands.

★

Sir James Hamilton has been appointed a non-executive director of SMITHS INDUSTRIES.

Mr Bernard D. Steinart has been appointed deputy chairman of ALEXANDER HOWDEN, Alexander Howden Holdings' international wholesale insurance broking arm. Mr Brian C. Ainsworth, Mr F. Paul Chilton, Mr Michael H. Hughes and Mr Ian A. Waite have also been appointed to the board.

★

Mr Brian Coe has been appointed operations director of RADIO RENTALS. Mr Michael Bell replaces Mr Coe as marketing director.

★

Mr Dave Williams has been appointed operations director for INTERNATIONAL MANAGEMENT AND ENGINEERING GROUP.

★

Mr Godfrey Wilson has become managing director of DIGITAL PAGING SYSTEMS (UK).

★

Mr Mark Phythian-Adams has been appointed a non-executive director of COLE GROUP.

BASE LENDING RATES

A.B.N. Bank	14 %	C. Hoare & Co.	†14 %
Allied Irish Bank	14 %	Hong Kong & Shanghai	14 %
Henry Ansbacher	14 %	Johnson Matthey Bkrs.	14 %
Amro Bank	14 %	Knowsley & Co. Ltd.	14½%
Armco Trust Ltd.	14½%	Lloyds Bank	14
Associates Cap. Corp.	14 %	Edward Manson & Co.	15 %
Banco de Bilbao	14 %	Meghraj & Sons Ltd.	14 %
Bank Hapoalim	14 %	Midland Bank	14 %
BCCI	14 %	■ Morgan Grenfell	14 %
Bank of Ireland	14 %	Mount Credit Corp. Ltd.	14 %
Bank of Cyprus	14 %	National Bk. of Kuwait	14 %
Bank of India	14 %	National Girobank	14 %
Bank of Scotland	14 %	National Westminster	14 %
Banque Belge Ltd.	14 %	Northern Bank Ltd.	14 %
Barclays Bank	14 %	Norwich Gen. Trust	14 %
Beneficial Trust Ltd.	15 %	People's Tst. & Sv. Ltd.	15 %
Brit. Bank of Mid. East	14 %	Provincial Trust Ltd.	15 %
■ Brown Shipley	14 %	R. Raphael & Sons	14 %
CL Bank Nederland	14 %	P. S. Refson	14 %
Canada Perm'nt Trust	14 %	Roxburghe Guarantee	14½%
Cayzer Ltd.	14 %	Royal Bank of Scotland	14 %
Cedar Holdings	14 %	Royal Trust Co. Canada	14 %
■ Charterhouse Japhet	14 %	■ J. Henry Schroder Wagg	14 %
Choulartons**		Standard Chartered	‖14 %
Citibank NA	14 %	Trade Dev. Bank	14 %
Citibank Savings	12¾%	TCB	14 %
Clydesdale Bank	14 %	Trustee Savings Bank	14 %
C. E. Coates & Co. Ltd.	14½%	United Bank of Kuwait	14 %
Comm. Bk. N. East	14 %	United Mizrahi Bank	14 %
Consolidated Credits	14 %	Westpac Banking Corp.	14 %
Co-operative Bank	*14 %	Whiteaway Laidlaw	14½%
The Cyprus Popular Bk.	14 %	Williams & Glyn's	14 %
Dunbar & Co. Ltd.	14 %	Wintrust Secs. Ltd.	14 %
Duncan Lawrie	14 %	Yorkshire Bank	14 %
E. T. Trust	14½%		
Exeter Trust Ltd.	14½%		
First Nat. Fin. Corp.	15½%		
First Nat. Secs. Ltd.	14½%		
■ Robert Fleming & Co.	14 %		
Robert Fraser & Ptns.	14½%		
Grindlays Bank	‡14 %		
■ Guinness Mahon	14 %		
■ Hambros Bank	14 %		
Heritable & Gen. Trust	14 %		
■ Hill Samuel	§14 %		

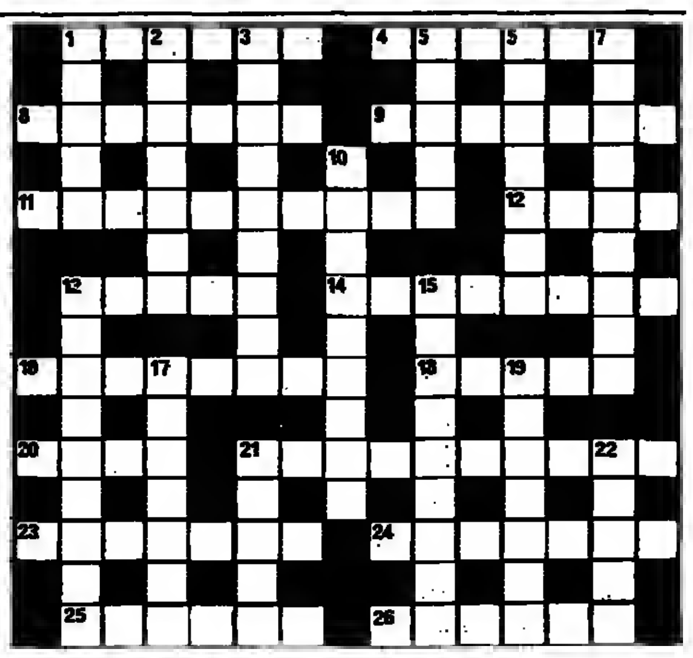
■ Members of the Accepting Houses Committee.
* 7-day deposits 11%. 1 month 11.75%. Fixed rate 12 months £2,500 11.75%. £10,000 12 months 12.00%.
† 7-day deposits on sums of under £10,000 11%. £10,000 up to £50,000 12%. £50,000 and over 12½%.
‡ Call deposits £1,000 and over 11%.
‖ 21-day deposits over £1,000 12½%.
¶ Mortgage base rate.
§ Demand deposits 11%.
** See Provincial Trust Ltd.

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

INSURANCES

FT CROSSWORD PUZZLE No 5,659



ACROSS

1 Scottish island makes mark on scholar (6)

4 Conceal a privy (6)

8 Accountant goes to pub and French show (7)

9 Wine produced by Republican Army (7)

11 Offer measure to newcomer (10)

12 Heads turn round in panic seeing flock of sheep (4)

13 Hit the drink (5)

14 Real fabric (8)

16 Coach group provide present for boy (5, 3)

18 Intermediate sometimes neglected? (5)

20 Auction in Greater Manchester (4)

21 Sailor and hill-dweller meet girl at dance (10)

23 Reprove the Continental caught by river (7)

24 Drop in a new dagger (7)

25 The first composer to go (6)

26 Play back? (6)

DOWN

1 Way beer becomes tainted (5)

2 An evil fellow is hell! (7)

3 Bishop could see choir make a bloomer (3-6)

5 "Though last, not ——— in love" (Julius Ceaser) (5)

6 Gun on mountain — one to make a noise (7)

7 End limited period with fashionable goddess (9)

10 Clear up dirty room in school? (9)

13 Repent — man could be remaining indefinitely (9)

15 Seem not to change nappy! (9)

17 Not the t[illegible] of selling for the activ[illegible] (7)

19 Baron t[illegible] (7)

21 West-end language is abrupt (5)

22 Many go to old city — I'd find it ghastly (5)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

INSURANCE, OVERSEAS & MONEY FUNDS

Liberty Life Assurance Co Ltd.
Station Rd, New Barnet. 01-440 8210
Fund Managers, Touche Remnant & Co

Sel Sec A	27 3	28.8	
Blue Chip	22 1	23 3	-0 4
Fixed Yield	19 6	20 7	+0 1
Deposit Fund	16.0	16 9	
Managed	21 1	22 3	
International	29 2	10 8	
Property	17.2	18 2	
Pacific	22.0	24 1	+0.3
Equity	16 4	17 3	+0.1
Special Sits	25.4	26 8	
Int. Currency	14.2	15 0	
Index Linked Secs	11.2	11 8	
American	24 2	25 5	-0 1

Life Assur. Co. of Pennsylvania
8, New Rd, Chatham, Kent. Medway 812348
LACOP Units ... 14.85 15.57

Lloyds Life Assurance
20, Clifton St, EC2A 4HX. 01-920 0202/0733 262524

Multi Gwth Feb 6	£314.17			
Op 0 Prop Feb 28	264.7	278.7		
Op 8 Equity Feb 28	372.7	392.4	+2.7	
Op Hy Feb 28	267.6	281.7	+2.9	
Op 9 Man Feb 28	349.2	367.6	-0.6	
Op 8 Dep Feb 28	202.4	213 1		14 00
Op 8 Bond Feb 28	188.0	197.9	-0.4	
Op 8 Int Dep Feb 28	144.9	152.6	+0.3	8.29
Op 0 Int Man Feb 28	218.8	230.4	-2.0	
Op 0 US$ Feb 28	159.0	167.4	-4.2	12 12
Pens B Pr Ac Feb 28	349.1	367.5	+0.6	
Pens B Eq Ac Feb 28	1081.7	1138.7	+4.7	
Pens B FI Ac Feb 28	393.1	413.8	+3.9	
Pens 0 Md Act Feb 28	626.4	659.4	+2.5	
Pens B Dp Acc Feb 28	325.7	342.9	+2.0	
PensBGart Globe Feb 28	117.2	123.4	+0.7	
Pens B Gart NA Feb 28	109.1	114.9	-4.5	
PensBGartP Feb 28	125.2	131.8	+2.9	

For Pensions Capital Units please ring ext 2396 or 2361.

Britannia Funds—Series A

Am Smlr Co's	148.5	156.4	+2.4
Am Spec Sits	172.7	181.8	+2.0
Commodity	87.3	91.9	+0.5
Extra Inc	116.3	122.9	+0.5
Far East	123.1	129 6	+2.4
Fi Sects	156.T	165.0	
Gold & Gen	79 7	78.7	-0.7
Inc Growth	160.8	169.3	+0.3
Intl Fund	129.5	136.4	+1.1
Japan Perf	160.8	169.3	+3.8

National Provident Institution
48, Gracechurch St, EC3P 3HH 01-623 4200

Managed	201 2	211 8	
UK Equity	229 1	241 6	-0 3
Overseas Eq	215 8	227 2	-2 5
American	218.8	230 4	+7 5
Far East	187 2	197 1	+1 3
Property	112.8	118 8	
Fixed Int	160.1	168 6	+0 4
Indexed Gilt	110.0	115.8	+0 1
Deposit	114 8	170 9	

Pension Fund Prices

Man Initial	202.3	213 0	+0 3
Man Acc	226.0	237 9	+0 3
UK Eq Initial	212.3	223.5	-0.3
UK Eq	233.9	246.3	-0.4
Overseas Eq. Initial	237.5	249 8	+2.1
Overseas Eq.	274 4	288 9	+3.7
American Initial	254.2	267 6	+3.9
American	281.4	296.3	+4 4
Far East Initial	242.2	255 0	+2.2
Far East	268.9	283.1	+2.5
Prop. Initial	108.5	114.3	
Prop	120.1	126.4	
Fixed Int. Initial	143.8	151 4	+0.3
Fixed Int.	158.5	166.9	-0.4
Indexed Gilt Initial	103.0	108.5	-0 1
Indexed Gilt	114.8	120.1	-0.2
Deposit Initial	115 7	119 7	
Deposit	126.3	133.0	

NPI Pensions Management Ltd.
Managed Fund ... 560 4 574.8
Prices March 1. Next dealing April 1

New Zealand Insurance PLC
110/114, Baxter Avenue, Southend. (0702) 344555

Kiwi Key (Managed)	373.7	385.2	
UK Equity	169.2	178.1	+0.4
American	280.9	295.7	-1.5
Pacific	398.5	419 4	+1.6
Property	153.6	161.7	
Gilt	175.6	184.8	
High Inc. Equity	160.8	169.3	+0.2
High Inc. Fxd. Int.	103.7	109.1	+0.4
Deposit	150.0	158 8	+0.1
Index-Linked Gilt	105.3	110.8	+0.2

Norwich Union Insurance Group
PO Box 4, Norwich NR1 3NG. 0603 622200
NUIG (Managed Funds) Ltd.

Managed Fund	518.9	546.2	-3.5
Equity Fund	958.0	1008.6	-4.7
Property Fund	268.8	282 9	+0.1
Fixed Int. Fund	281.7	296.5	-1.5

OFFSHORE AND OVERSEAS

World Wide Growth Management
10a, Boulevard Royal, Luxembourg
Worldwide Gth Fd. ... $11.53
Inv. Adv.: M. A G. Inv. Mngt., Ltd., London.

Wren Commodity Management Ltd.
10, St George's St, Douglas IoM. 0624 25015

Wren Com. Fund	12.8	13.3		3.10
Chinese Fund	57 1	59.5		1.70
Precious Metal Fund	69.6	72.5		8.30
Vanguard Cmdy. Fd.	19 2	19 7	-0.2	0.00
Financial Futures Fd.	32.4	33.7		

Yamaichi Dynamic Mngt Co SA
10A Boulevard Royal, Luxembourg
Dynamic Gwth Fd. ... $9.70 +0.15

Money Market Trust Funds

	Nom	CAR	Int Cr	Notice
The Money Market Trust 63 Qn Victoria St, EC4N 4ST 01-236 0952				
Call Fund	14.04	14.64	6-mth	Call
7-day Fund	14.01	14.62	6-mth	7-day
Oppenheimer Money Management Ltd 66 Cannon St, EC4N 6AE. 01-236 1425				
Call Fund	13 70	14.16	6-mth	Call
7-day Fund	13.97	14.41	6-mth	7-day
Money Mngt. Acct.	13.50	14.20	3-mth	Call
Dollar	6.62	6.72	6-mth	2-day

Money Market Bank Accounts

	Nom	APR	Int Cr	Notice
Aitken Hume 30 City Road, EC1V 2AY. 01-638 6070				
Treasury Acc	13 75	14 48	Qtr	Call
Mth. Int. Chq.	13.50	14.37	Mthl	Call
Bank of Scotland 38 Threadneedle St, EC2P 2EH. 01-628 8060				
Cheque Acc	11.25	14.09	Mthl	Call
Barclays Prime Account PO Box 125, Northampton 0604 252891				
High Int. Cheque	13.50	14 19	Qtr	Call
Britannia Grp of Investment Companies 29 Finsbury Circus, EC2M 5QL. 01-588 2777				
Cater Allen	13 25	14 04	Mthl	Call
Charterhouse Japhet plc 1 Paternoster Row, EC4M 7DH. 01-248 3999				
Sterling	13.25	14.08	Mth	Call
U.S. Dollar	7.50	7.76	Mth	Call
German Marks	5.0	5.11	Mth	Call
Swiss Francs	2.0	2.01	Mth	Call
Japanese Yen	5.0	5.11	Mth	Call
Co-operative Bank 78-80 Cornhill EC3 01-626 6543 Ex 464				
Under £1,000	12 00	12.45	Qtr	Call
Over £1,000	14 00	14.75	Qtr	Call

Darlington & Co Ltd

LONDON SHARE SERVICE

BRITISH FUNDS

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
"Shorts" (Lives up to Five Years)						
21 Nov	21 May	Treas 3pc 1985	97⅞	15.10	3.07	14.17
15Jan	15Jul	Treas 11½pc 1985	99⅛	10.12	11.59	13.76
5 Mar	3 Sep	Treas 8¼pcCm '85	97⅝xd	25.1	8.94	13.19
22 May	22 Nov	Exch. 12¼pc 1985	99½	16.10	12.33	13.05
25 Aug	25 Feb	Exch. 13¼pc '86	99⅛	21.1	11.85	12.65
13Oct	11Apr	Treas. 10pcCm 1986	97⅛	4.9	10.30	12.90
19 Nov	19 May	Treas 3pc 1986	94	15.10	3.19	8.31
19 Nov	19 May	Exch. 10½pc Cv '86	97⅝	15.10	10.76	12.64
12Dec	12Jun	Treas 12pc 1986	99⅜	5.11	12.08	12.48
10 Jan	10 Jul	Treas 8¾pc 1984-86‡‡	96⅛	4.12	8.84	11.66
29 Apr	29 Oct	Exch. 14pc 1986	102⅜	24.9	13.67	12.27
21 May	21 Nov	Exch. 2½pc 1986	89½	15.10	2.79	9.23
22Jul	22Jan	Exch. 13¼pc 1987	101⅞	17.12	13.00	12.04
10 Aug	10 Feb	Treas 10¼pcCv '87	97¼	4.1	10.54	4.86
24Aug	24Feb	Exch 2½pc 1987	87⅜	18.1	2.86	9.65
6Oct	6Apr	Exch. 10½pc 1987	97⅜xd	1.3	10.79	12.03
1 Nov	1 May	Funding 6½pc '85-87‡‡	92	25.9	7.07	10.74
12Dec	12Jun	Treas. 10pc 1987	96	5.11	10.42	12.03
14Jan	14Jly	Treas 3pc 1987	86½	10.12	3.47	9.20
5May	5Nov	Treas. 12pc 1987	100	27.9	12.00	11.93
26 Jul	26 Jan	Treas 7¾pc 1985-88‡‡	92¼	20.12	8.40	10.92
10Nov	10May	Exch 10½pc '88	96⅛	4.10	10.92	12.06
14Dec	14Jne	Treas 9¾pc Cv '88	94⅛	7.11	10.35	11.92
1Jan	1Jul	Transport 3pc '78-88	83¼	26.11	3.61	8.92
25 Apr	25 Oct	Treas. 9½pc '88	92¾	18.9	10.24	11.99
22 Aug	22 Feb	Treas 11½pc 1989	98⅛	16.1	13.64	11.88
18 Oct	18 Apr	Treas 9½pc Cnv. '89	92⅛	11.9	10.31	11.94
14Dec	14Jun	Treas 10½pc 1989	95⅛	7.11	11.04	11.97
1Feb	1Aug	Exch.10pc 1989	93⅛	27.12	10.73	12.04
29 Mar	29 Sep	Exch 11pc 1989	96⅛xd	20.2	11.36	11.96
13 Apr	15 Oct	Treas 5pc 1986-89	81⅜	10.9	6.14	10.07
13 Jul	15 Jan	Treas 13pc 1990‡‡	104⅝	10.12	12.43	11.71
		Exch 11pc '90 (£20pd)●	19½		11.30	11.75
Five to Fifteen Years						
22 Sep	22 Mar	Exch. 12½pc 1990	101⅞xd	13.2	12.20	12.10
13 Dec	13 Jun	Treas 8¼pc 1987-90‡‡	91	8.11	9.25	10.98
25 Apr	25 Oct	Treas. 10pcCv 1990	95⅞	18.9	10.83	11.89
10Ja	10Jan	Treas 11¾pc 1991	101	4.12	11.63	11.90
5Oct	5Apr	Funding 5¾pc '87-91‡‡	80½xd	1.3	7.10	10.00
25Apr	25Oct	Exch. 11pc 1991	100⅛	18.9	11.43	11.82
22Jly	22Jan	Treas 12¾pc 1992‡‡	105⅝	17.12	12.24	11.83
21Aug	21Feb	Treas. 10pc 1992	92⅝	15.1	10.83	11.63
7 Nov	7 May	Treas 10½pc Cv 1992‡‡	99⅝	—	11.15	13.70
25 Feb	25 Aug	Exch. 12¼pc '92	102	21.1	12.04	11.89
22Mar	22Sep	Exch 13½pc 1992	106¾xd	13.2	12.63	12.07
14Jan	14Jul	Treas 12½pc 1993‡‡	105	10.12	12.10	13.86
15Mar	15Sep	Funding 6pc 1993‡‡	76⅞xd	6.2	7.79	10.07
23May	23Nov	Treas 13¾pc 1993‡‡	113¼	17.10	12.56	11.96
1 Sept	1 Mar	Treas 14½pc 1994‡‡	114⅝xd	23.1	12.66	11.83
27Oct	27Apr	Exch 13½pc 1994	112⅛	20.9	12.51	12.04
22Feb	22Aug	Exch. 12½pc 1994	105⅜	16.1	12.10	13.92
17May	17Nov	Treas 9pc 1994‡‡	90⅛	11.10	10.26	11.08

[illegible]

Over Fifteen Years

[illegible]

Undated

[illegible]

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ELECTRICALS

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ENGINEERING

[illegible]

ENGINEERING—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
—		Bailey (C. H.)	21½	3'80	—	—	—	—
Feb.	Aug.	Baker Perkins 50p	207	24.12	§6.45	2.7	4.5	10.4
May	Nov.	Banro Inds. 20p	84	17.9	¢3.3	1.2	5.6	22.0
—		Barbican Hldgs 1p	3½	4'80	—	—	—	—
May	Dec.	Beauford 10p	72	29.10	†4.0	2.5	7.9	7.1
—		Belgrave Hldgs	124	5'80	—	—	—	—
Apr	Oct	Bevan (D.F.) 5p	16½	11.2	d1.0	3.0	8.7	4.3
Apr	Sept	Birmid Qualcast	82½xd	25.2	3.25	♦	5.6	♦
Jan.	Sept.	Birmingham Mint	208	24.12	§11.5	1.9	7.9	(8.3)
Ma Ju Se De		Black & Decker $0.50	£23⅛	11.12	Q$4c	—	2.5	—
—		Blackwood Hodge	27	11'82	—	—	—	—
—		Boulton Wm 10p	9	11'83	—	—	—	—
Feb	July	Braham Millar 10p	67	10.6	†1.1	2.4	2.3	24.6
Jan	Aug	Braithwaite £1	124	24.12	†9.1	0.8	10.5	(18.7)
Feb	Oct	Brasway 10p	43	14.1	†h1.33	2.8	4.4	10.5
—		Bristol Ch.Ship10p	4½	10'80	—	—	—	9.8
Jan	July	Brit. Steam 20p	113	2.12	†h5.2	1.8	6.7	11.8
Feb.	Nov	Brons. Cast. 10p	27	11.2	h0.92	4.2	4.8	5.5
Nov	May	Bronx Eng. 10p	16	26.3	‡1.04	2.4	‡	(5.1)
—		Brooke Tool	25	28.1	1.0	♦	5.7	♦
Apr.	Aug.	Brown & Tawse	126	14.1	4.8	2.3	3.4	10.4

[illegible]

FOOD, GROCERIES, ETC

[illegible]

HOTELS AND CATERERS

[illegible]

HOTELS—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
May	Oct	Queens Moat 5p	54	3.9	†h1.11	2.3	2.9	17.2
June	Dec	Do. 10½pcCv. 89-91	£237	10.12	Q10½%	7.6	(4.5	—
—		Ryan Hotels 5p	20½	9'80		♦	4.1	♦
June		Savoy "B" 10p	364	30.4	2.0	5.6	0.8	24.3
		Stakis 10p	183xd	25.2	3.0	2.0	2.3	18.1
Apr	Sept	Trusthouse Forte	152	11.2	4.74	1.6	4.5	19.1
Apr.	Oct.							

INDUSTRIALS (Miscel.)

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
Mar.	Oct.	AAH	119	3.9	6.18	2.3	7.4	8.3
June	Dec	AGA AB K50	£36½	25.5	Q22%	♦	2.7	♦
March	Oct	AGB Research 10p	225	28.1	†h6.0	1.4	3.8	24.3
Mar	Sept	AIM 10p	104	11.2	d5.75	1.2	7.9	(13.9)
August		‡Aaronite Group	103	2.7	2.8	♦	3.9	♦
Oct.	Apr	Aaronson Bros. 10p	95xd	25.2	4.2	♦	6.3	♦
Mar.	Oct.	Abbey	52	9'83	—	—	—	5.5
—		Aberfoyle Hldgs 5p	49	—	—	—	—	—
October		AG1	330	3.9	¢5.0	5.8	2.2	21.0
June		Alfa-Laval AB 'B' SK50	£38⅝	8.5	Q18%	♦	5.0	♦
			126	15.10	bg4.8	3.6	5.4	7.8

[illegible]

INDUSTRIALS—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
Oct.	Apr	Magnolia Group	47	17.9	2.5	3.2	7.6	4.6
—		‡Mainmet Hldgs 10p	54	—	—	—	—	—
Apr.	Oct.	Man. Ship Can. £1	292xd	25.2	5.5	3.5	2.7	15.3
Oct	Apr	Marley	84	13.8	3.75	q2.2	6.3	9.2
Feb.	Oct.	Marling Ind. 10p	47	24.12	†h3.0	5.6	2.8	7.9
Dec	June	Marshall L'sy. 'A'	30	1.10	†1.2	3.6	4.5	(6.8)
Jan.	July	Marshall's Universal	74	12.11	†1.75	—	3.4	22.3
June	Dec	Do. 7½pcCnRedPf £1	88	10.12	7½%	—	13.4	—
Nov	May	Martin-Black	228	5'79	—	—	—	—
—		‡Mathesons 7¼%	£96	30.6	Q7¼%	2.3	12.1	—
Jan.	June	Metal Box £1	412	26.11	†15.0	3.2	5.2	6.6
Nov.	June	Metal Closures	154	17.9	6.3	2.5	5.8	(8.5)
—		‡Metal Sciences 2½p	16	—	—	—	—	—
July	Jan	‡Midland Marts	83	26.11	4.0	1.0	6.9	10.5
Jan	May	Mitchell Cotts	79½	26.11	4.0	1.5	7.1	11.4
Jan.	July	Morgan Crucible	193	12.11	†7.5	1.2	5.6	19.5
May		‡Morris (W) F.A. 20p	23½	—	bg0.5	4.0	3.0	22.3
Jan.	Aug.	Moss (Robt.) 10p	180	26.11	†12.5	2.3	3.6	14.5
May	Nov	‡NMW Computers	268	15.10	6.0	3.0	3.2	14.9
Mar.	Sept.	Nash Inds.	35	14.1	2.5	1.5	10.2	8.1
Oct.	April	‡Neil & Spencer 10p	40	9'81	♦	—	—	♦
Jan	July	Newman Industries	27	12'79	—	—	—	(15.2)
Jan July		Do. 10pc Cn.Cnv.Pf.	28	12.11	10%	—	5.1	—
April	Oct	Nolton	53	26.11	g1.1	4.5	3.0	8.9
Jan.	Aug.	Norcros	160	24.12	†7.5	2.4	6.7	8.4
Oct.	April	Nu-Swift 5p	59	29.10	†2.4	3.2	5.8	7.7
Feb.	Aug.	Oakwood Grp.	87	28.1	4.5	♦	7.4	♦
Jan.	June	Office & Elect.	150	29.10	7.5	4.2	7.1	6.9
—		Oldacre 20p	96	28.1	g4.0	2.6	6.0	8.5
May	Nov	Oriflame Intl SA	675	1.10	†Q55c	2.2	7.1	6.4
Jan.	June	Ovenstone 12½c	16	12.11	†Q4.5c	2.2	‡	3.7
May	Nov.	Ozalid 9pc Cnv 87-92	£168	15.10	Q9%	—	5.4	—
—		‡PCT Grp 10p	185	29.10	g4.8	2.9	6.4	6.4
—		PLM 'B' Sk 25	£33¾	—	Q21.6%	♦	4.1	♦

LEISURE—Continued

Dividends Paid		Stock	Price	Last xd	Div Net
Jan	April	LWT	238	26.11	14.4
Jan	July	Leisuretime Int. 10p	62	17.9	2.1
June	Jan.	Magnum Ag. M. 10p	152	14.1	8.75
—		‡Media Tech IM 20p	165	—	ng2.50
Apr.	Dec.	Medminster 10p	153	26.11	4.85
Oct	May	‡Miss World 10p	240	3.9	3.6
—		‡Nationwide Leis.	26	30.4	0.5
—		‡Mimsle Int 20c	28	—	—
July		‡Owners Abroad	22½	9.4	0.75
—		Phonax (Lon.)	38	4'82	—
—		‡P'dilly Radio NV 5p	22	28.1	1.87
December		‡Pineapple Dnc St 10p	70	24.12	d1.5
Sept.	Apr.	Pleasurama 5p	403	17.9	Hg9.2
—		‡Pres Entertain 50p	83xd	—	bg2.0
Feb-July		‡Radio City 'A' NV	33	10.12	5.6
—		‡Radio Clyde NV	47	24.12	3.25
July	Jan	Riley Leisure 10p	53	29.10	†4.2
Apr.	Nov.	Saga Hols. 20p	175	3.9	4.0
April		Samuelson Grp £1	920	11.2	†9.0
—		‡Sangers Photo 10p	35	29.10	b2.0
—		‡Scanro 50p	273	—	bg3.6
Dec	May	Scott. TV 'A' 10p	154	29.10	†8.1
		SenCo Inc $0.125	444	31.1	—
—		‡SelecTV 10p	9	—	—
—		‡Spectrum 5p	115	—	g2.0
May	Nov	TSW 5p	29½	29.10	1.5
	March	TVS N/Vtg 10p	137	11.2	6.0
—		‡Television Svcs 50p	198	17.9	0.5
—		Tottenham Hotspur	71	11.2	†d2.3
Oct	Apr	Trid'nt TV 'A' 10p	240	11.2	♦7.5
—		‡21st Century Dist.	148	—	—
	Dec	‡Tyne Tees TV 'A' £1	152	30.12	10.5
Jan	July	Ulster TV N/V 'A'	85	29.10	4.75

MOTORS, AIRCRAFT TRADES

Motors and Cycles

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PROPERTY

PROPERTY—Continued

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

INVESTMENT TRUSTS—Cont.

Finance, Land, etc

INSURANCES

LEISURE

OIL AND GAS

OVERSEAS TRADERS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Diamond and Platinum

Central African

MINES—Continued

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Tins

Miscellaneous

NOTES

REGIONAL & IRISH STOCKS

OPTIONS — 3-month call rates

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This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £800 per annum for each security.

CURRENCIES, MONEY and CAPITAL MARKETS

FINANCIAL FUTURES

LONDON

THREE-MONTH EURODOLLAR
$1m points of 100%

	Close	High	Low	Prev
March	90.33	90.40	90.28	90.40
June	89.42	89.49	89.32	89.51
Sept	88.88	88.92	88.75	88.96
Dec	88.44	88.52	88.35	88.56
March	88.11	88.13	88.11	88.23

Estimated volume 6,840 (6,463)
Previous day's open int 15,720 (15,188)

THREE-MONTH STERLING
£500,000 points of 100%

	Close	High	Low	Prev
March	86.20	86.23	86.17	86.28
June	87.65	87.80	87.61	87.80
Sept	88.49	88.49	88.40	88.50
Dec	88.42	88.47	88.42	88.89
March	88.45	—	—	88.40

Estimated volume 1,492 (1,534)
Previous day's open int. 6,548 (6,530)

20-YEAR 12% NOTIONAL GILT
£50,000 32nds of 100%

	Close	High	Low	Prev
March	103-23	103-24	103-09	103-22
June	104-15	104-16	104-02	104-14
Sept	107-27	—	—	107-25
Dec	107-10	—	—	107-16
March	106-31	—	—	107-07

Estimated volume 2,046 (3,896)
Previous day's open int 5,530 (6,036)
Basis quote (clean cash price of 13¼% Treasury 2003 less equivalent price of near futures contract) −8 to par (32nds)

STERLING £25,000 $ per £

	Close	High	Low	Prev
March	1.0700	1.0790	1.0690	1.0795
June	1.0695	1.0682	1.0570	1.0695
Sept	1.0590	1.0575	1.0545	1.0650

Estimated volume 916 (9)
Previous day's open int 3,314 (3,317)

DEUTSCHE MARKS
DM 125,000 $ per DM

	Close	High	Low	Prev
March	0.2982	0.2988	0.2976	0.2994
June	0.3008	0.3008	0.3001	0.3021

Estimated volume 342 (8)
Previous day's open int 297 (298)

SWISS FRANCS
SwFr 125,000 $ per SwFr

	Close	High	Low	Prev
March	0.3480	0.3492	0.3480	0.3512
June	0.3512	0.3522	0.3513	0.3544

Estimated volume 333 (nil)
Previous day's open int 136 (136)

JAPANESE YEN Y12.5m $ per Y100

	Close	High	Low	Prev
March	0.3822	0.3830	0.3827	0.3856
June	0.3858	0.3860	0.3858	0.3887

Estimated volume 247 (3)
Previous day's open int 122 (122)

FT-SE 100 INDEX
£25 per full index point

	Close	High	Low	Prev
March	124.80	125.50	124.50	125.80
June	125.16	125.50	125.10	126.40
Sept	125.45	—	—	126.70

Estimated volume 2,702 (3,694)
Previous day's open int 1,713 (1,712)

U.S. TREASURY BONDS
8% $100,000 32nds of 100%

	Close	High	Low	Prev
March	69-05	69-08	68-19	69-29
June	68-08	68-10	67-16	67-31

Estimated volume 2,702 (3,694)
Previous day's open int 2,317 (2,264)

CHICAGO

U.S. TREASURY BONDS (CBT)
8% $100,000 32nds of 100%

	Close	High	Low	Prev
March	69-09	69-13	68-15	68-28
June	68-09	68-14	67-13	67-28
Sept	67-18	67-21	66-22	67-03
Dec	66-27	66-31	66-04	66-15
March	6-10	66-12	65-23	65-30
June	65-28	65-31	65-05	66-18
Sept	65-16	65-18	64-27	65-04
Dec	65-06	65-06	64-31	64-26
March	64-29	—	—	64-17
June	64-21	64-23	64-14	64-08

U.S. TREASURY BILLS (IMM)
$1m points of 100%

	Close	High	Low	Prev
March	91.31	91.44	91.28	91.42
June	90.67	90.83	90.63	90.80
Sept	90.22	90.32	90.18	90.30
Dec	89.88	89.96	89.83	89.94
March	89.59	89.68	89.56	89.67
June	89.40	89.48	89.35	89.47
Sept	89.23	89.29	89.19	89.30
Dec	89.06	89.04	89.04	89.14

CERT. DEPOSIT (IMM)
$1m points of 100%

	Close	High	Low	Prev
March	90.54	90.88	90.54	90.68
June	89.69	89.84	89.64	89.84
Sept	89.13	89.23	89.03	88.25
Dec	88.72	88.81	88.66	88.83

THREE-MONTH EURODOLLAR (IMM)
$1m points of 100%

	Close	High	Low	Prev
March	90.16	90.37	90.15	90.31
June	89.28	89.44	89.21	89.45
Sept	88.74	88.88	88.66	88.86
Dec	88.30	88.46	88.24	88.44
March	88.02	88.15	87.96	88.13
June	87.77	87.90	87.74	87.87
Sept	87.56	87.68	87.52	97.66

STERLING (IMM) $e per £

	Close	High	Low	Prev
March	1.0695	1.0730	1.0650	1.0736
June	1.0600	1.0625	1.0565	1.0630
Sept	1.0560	1.0590	1.0540	1.0686
Dec	1.0560	1.0560	1.0530	1.0575

WEEKLY CHANGE IN WORLD INTEREST RATES

LONDON	March 1	change	NEW YORK	1 March	change
Base rates	14	Unch'd	Prime rates	10½	Unch'd
7 day Interbank	14⅛	[illegible]	Federal funds	8¾	+⅛
6mth Interbank	14	Unch'd	3 Mth. Treasury Bills	8.66	+0.19
Treasury Bill Tender	13.0486	−0.0586	6 Mth. Treasury Bills	8.82	+0.41
Band 1 Bills	13⅞	Unch'd	3 Mth. C D	9.13	+0.30
Band 2 Bills	13⅝	Unch'd	FRANKFURT		
Band 3 Bills	13⅝	Unch'd	Lombard	6.0	Unch'd
Band 6 Bills	16⅝	Unch'd	One Mth. Interbank	6.10	+0.528
3 Mth. Treasury Bills	13⅞	+⅛	Three month	6.295	+0.2
1 Mth. Bank Bills	13⅞	+⅛	PARIS		
3 Mth. Bank Bills	13⅞	+⅛	Intervention Rate	10¼	Unch'd
TOKYO			One Mth. Interbank	10¾	Unch'd
One month Bills	6.63125	+0.0625	Three month	10¾	+⅛
Three month Bills	6.34375	Unch'd	MILAN		
BRUSSELS			One month	15⅞	+⅛
One month	10½	Unch'd	Three month	16	+¼
Three month	10⅞	+¼	DUBLIN		
AMSTERDAM			One month	14¼	Unch'd
One month	6⅞	Unch'd	Three month	14⅜	Unch'd
Three month	7⅜	+⅛			

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, and band 3 bills 34 to 63 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week. Band 4 bills 13⅝.

FOREIGN EXCHANGES

Bundesbank trial of strength

BY COLIN MILLHAM

After a week of record breaking swing the dollar finished lower against the D-mark and yen, little changed in terms of the Swiss franc, and slightly higher against the pound. But this cost European central banks at least $3½bn in intervention, with almost all the effort concentrated on Wednesday and Friday, when the major central banks, with the exception of the Swiss National Bank, attempted to break the speculative demand.

One or two dealers complained that the market had been orderly, and that the central banks created the disorderly conditions by the intervention. The market was certainly trading on normal narrow spreads until Wednesday, when the sudden attack by the banks created virtual chaos.

But the attack was a success as far as the Bundesbank led consortium was concerned, bringing the dollar down from a record trading high of DM 3.4780 on Tuesday to a low of DM 3.27 on Wednesday, while sterling improved from a trading low of $1.0360 to a peak of $1.1070.

The central banks had been unable to come to grips with the market until confidence showed signs of waning late Tuesday when Mr Paul Volcker, chairman of the Federal Reserve Board, suggested to a U.S. Congressional sub-committee that the large trade and budget deficits will eventually weaken the dollar and hinted at more intervention by the Federal Reserve.

The main worry now must be that almost as much money was spent defending European currencies on Friday as on Wednesday, but the dollar increased in value. The Bundesbank was extremely vigilant on Friday, intervening in Hong Kong, before Europe began trading, and knocking the dollar down from a Far East peak of DM 3.3850 to the day's low in Frankfurt of DM 3.32. But the market then came back at the Bundesbank, and a trial of strength began, which will obviously continue this week. Bids for dollars at the Frankfurt fixing totalled over $400m, but the central bank chose not to intervene, letting the rate rise to DM 3.335, but then hitting it back down to DM 3.35 shortly after, and with a great deal of effort managing to hold it there at the close.

STERLING EXCHANGE RATE INDEX
(Bank of England)

	March 1	Previous
8.30 am	70.9	71.5
9.00 am	71.0	71.6
10.00 am	70.9	71.5
11.00 am	70.9	71.7
Noon	70.7	71.5
1.00 pm	70.8	71.5
2.00 pm	70.7	71.6
3.00 pm	70.8	71.3
4.00 pm	70.8	71.3

£ in New York

	March 1	Prev. close
£ Spot	$1.0770-1.0780	$1.0718-1.0730
1 month	0.54-0.53pm	0.47-0.45pm
3 months	1.17-1.16pm	1.14-1.11pm
12 months	1.86-1.80pm	1.70-1.60pm

Forward premiums and discounts apply to the U.S. dollar.

POUND SPOT—FORWARD AGAINST POUND

March 1	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.0660-1.0810	1.0720-1.0730	0.54-0.50c pm	6.82	1.17-1.12pm	4.27
Canada	1.4770-1.4960	1.4860-1.4940	0.52-0.41c pm	3.74	0.94-0.79pm	2.32
Nethlnd.	4.03¾-4.08¼	4.07¼-4.08¼	2⅞-2⅝c pm	8.08	6⅞-6⅝pm	6.61
Belgium	71.07-72.90	72.50-72.90	28-23c pm	4.22	60-52pm	3.09
Denmark	12.78¼-12.89½	12.88¼-12.89½	3½-2½ore pm	2.68	8¾-7½pm	2.52
Ireland	1.1536-1.1610	1.1555-1.1575	0.12p pm-0.06d	−0.31	0.15pm-.29d	−0.24
W. Ger.	3.57-3.61¼	3.59½-3.60½	2⅞-2¾pm pm	9.38	7-6⅞pm	7.71
Portugal	193¾-198¾	198¾-199¾	170-505c dis	−20.46	485-1360d	−18.64
Spain	196-199½	198-199	35-20c pm	1.66	60-35pm	0.96
Italy	2220¼-2245½	2243-2244	2 lire pm-2 dis	—	5-10dis	−1.34
Norway	10.26¾-10.36½	10.33½-10.34½	1⅛-⅞ore pm	1.23	3⅛-2¾pm	1.23
France	10.81-11.04	11.02-11.03	3¼-3⅛c pm	3.74	7½-6¾pm	2.56
Sweden	10.13¾-10.23¾	10.20½-10.21½	1⅛-⅞ore pm	0.95	⅛pm-⅛dis	−0.07
Japan	278¼-281½	279½-280½	2.05-1.95y pm	8.57	6.35-5.15pm	7.50
Austria	25.10-25.38	25.23-25.38	17⅞-16⅛gro pm	6.15	44½-41½pm	6.80
Switz.	3.06-3.09	3.08-3.09	2⅜-2⅛c pm	8.87	6⅛-6pm	7.94

Belgian rate is for convertible francs. Financial franc 72.85-72.85. Six-month forward dollar 1.60-1.55c pm. 12-month 1.80-1.65c pm.

OTHER CURRENCIES

Mar. 1	£	$		£ Note Rates
Argentina Peso	286.84-287.62	267.90-268.16	Austria	25.10-25.40
Australia Dollar	1.6050-1.6125	1.4056-1.4098	Belgium	72.30-73.10
Brazil Cruzeiro	4,208-4,237	6,931-6,961	Denmark	12.83-12.96
Finland Markka	7.4665-7.4825	6.9700-6.9800	France	10.94-11.05
Greek Drachma	148.80-161.85	167.80-140.60	Germany	3.58-3.62
Hong Kong Dollar	8.3476-8.3655	7.8015-7.8035	Italy	2290-2250
Iran Rial	101.60*	97.40*	Japan	280-284
Kuwait Dinar (KD)	0.3296-0.3308	0.30755-0.30785	Netherlands	4.06-4.09
Luxembourg Fr	72.50-73.60	67.60-67.60	Norway	10.30-10.40
Malaysia Dollar	2.7640-2.7740	2.5855-2.5855	Portugal	194-213
New Zealand Dlr.	2.4330-2.4480	2.2796-2.3253	Spain	194-203
Saudi Arab Riyal	3.8595-3.8650	3.6005-3.6020	Sweden	10.14-10.26
Singapore Dollar	2.4278-2.4380	2.2690-2.2740	Switzerland	3.06-3.10
Sth African Rand	2.1728-2.2108	2.0410-2.0620	United States	1.08½-1.08½
U.A.E. Dirham	3.9360-3.9413	3.6720-3.6750	Yugoslavia	297-309

* Selling rate.

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu central rates	Currency amounts against Ecu March 1	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	44.9008	44.7052	−0.44	+0.34	±1.5522
Danish Krone	8.14104	7.95116	−2.33	−1.55	±1.6419
German D-Mark	2.24184	2.22202	−0.88	−0.10	±1.1475
French Franc	6.87456	6.78852	−1.25	−0.47	±1.3669
Dutch Guilder	2.52595	2.51359	−0.49	+0.29	±1.5171
Irish Punt	0.72569	0.714032	−1.61	−0.83	±1.6703
Italian Lira	1403.49	1382.06	−1.53	−1.46	±4.0610

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

FORWARD RATES AGAINST STERLING

	Spot	1 month	3 month	6 month	12 month
Dollar	1.0725	1.0673	1.0611	1.0566	1.0653
D-Mark	3.6000	3.5721	3.5320	3.4814	3.4020
French Franc	11.0250	10.9803	10.9547	10.9452	10.8862
Swiss Franc	3.0850	3.0692	3.0235	2.9749	2.8886
Japanese Yen	280.00	278.00	274.75	272.02	264.15

BANK OF ENGLAND TREASURY BILL TENDER

	March 1	Feb. 29		March 1	Feb.22
Bills on offer	£100m	£100m	Top Accepted rate of discount.	12.4769%	16.4769%
Total of applications	£290.65m	£258.77m	Average rate of discount	13.4035%	13.4699%
Total allocated	£100m	£100m	Average yield	13.87%	13.91%
Minimum accepted bid	£96.64	£96.64	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	11%	100%			

DOLLAR SPOT—FORWARD AGAINST DOLLAR

March 1	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.0600-1.0810	1.0720-1.0730	0.54-0.50c pm	3.82	1.17-1.12pm	4.27
Ireland†	0.9230-0.9355	0.9275-0.9295	0.48-0.38c pm	5.54	1.20-0.90pm	4.51
Canada	1.3800-1.3920	1.3905-1.3920	0.22-0.28c dis	−2.08	0.65-0.72dis	−1.98
Nethlnd.	3.7650-3.8150	3.7795-3.7805	0.72-0.69c pm	2.24	2.15-2.12pm	2.27
Belgium	66.85-67.60	67.50-67.90	9½-10½c dis	−1.78	25-27dis	−1.34
Denmark	11.89-12.08	11.98¼-11.99¼	1½-2ore dis	−1.75	2½-3dis	−0.81
W. Ger.	3.3200-3.3735	3.3495-3.3505	0.98-0.95pf pm	3.26	2.88-2.83pm	3.21
Portugal	183-188	184-183	260-650c dis	−26.08	690-1450d	−22.83
Spain	183¾-186	185-186	58-65c dis	−2.98	140-155dis	−3.19
Italy	2063-2095	2082½-2083½	9¾-9⅞ lire dis	−5.47	28-28¾dis	−5.44
Norway	9.55-9.65	9.64¼-9.64¾	3-3½ore dis	−4.03	7-7½dis	−3.00
France	10.15½-10.27	10.24¼-10.24¾	1.75-1.85c dis	−2.11	4.30-4.60dis	−1.74
Sweden	9.42-9.53	9.48¼-9.48¾	3¼-3¾ore dis	−4.40	9⅛-9¼dis	−3.99
Japan	259.80-261.60	260.25-260.35	0.60-0.56y pm	2.67	2.07-2.02pm	3.13
Austria	23.34-23.65	23.55-23.65	4⅛-4¼gro pm	2.29	16-14pm	2.54
Switz.	2.8450-2.8820	2.8570-2.8580	1.06-0.99c pm	4.29	3.76-2.69pm	3.80

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 67.75-67.90.

CURRENCY MOVEMENTS

Feb.28	Bank of England Index	Morgan Guaranty Change %
Sterling	70.8	−19.0
U.S. dollar	164.3	+38.6
Canadian dollar	88.4	−6.9
Austrian schilling	108.8	+3.6
Belgian franc	87.4	−10.8
Danish Kroner	76.4	−8.8
Deutsche mark	118.6	+6.9
Swiss franc	151.5	+5.2
Guilder	108.2	+2.4
French franc	62.8	−18.4
Lira	45.4	−15.4
Yen	154.7	+11.1

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (base average 1975=100).

CURRENCY RATES

Mar. 1	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	—	0.892690	0.618316
U.S. $	8	0.955964	0.661909
Canadian $	11.97	*	0.917733
Austria Sch.	4½	22.4747	15.5946
Belgian Fr.	11	64.6832	44.7062
Danish Kr.	7	11.4524	7.95116
D mark	4½	3.21638	2.22209
Guilder	5½	3.63649	2.51359
French Fr.	9½	9.81297	6.78852
Lira	15½	N/A	1382.06
Yen	5	249.029	173.026
Norway Kr.	8	9.19637	6.38079
Span'h Pta.	½	177.138	122.817
Swedish K.	9	9.02430	6.29145
Swiss Fr.	4	2.74183	1.89934
Greek Dr'ch	20½	133.357	92.4089
Irish Punt	12¾	1.03124	0.714032

*C$/SDR rate for Feb 28— 1.32688.

EXCHANGE CROSS RATES

Mar. 1	Pound St'rling	U.S. Dollar	Deutschem'k	J'panese Yen	French Franc	Swiss Franc	Dutch Guild	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	1.073	3.600	280.0	11.03	3.085	4.063	2244.	1.490	72.55
U.S. Dollar	0.932	1.	3.350	260.5	10.26	2.858	3.780	2093.	1.389	67.63
Deutschemark	0.278	0.298	1.	77.78	3.066	0.857	1.134	623.3	0.414	20.16
Japanese Yen 1,000	3.571	3.830	12.86	1000.	39.38	11.02	14.58	8012.	5.321	259.1
French Franc 10	0.907	0.975	3.266	254.0	10.	2.798	3.703	2035.	1.351	65.80
Swiss Franc	0.324	0.348	1.167	90.78	3.574	1.	1.323	727.2	0.483	23.52
Dutch Gilder	0.245	0.263	0.882	68.59	2.701	0.756	1.	549.8	0.365	17.77
Italian Lira 1000	0.446	0.478	1.605	124.8	4.914	1.375	1.820	1000.	0.664	32.34
Canadian Dollar	0.671	0.720	2.416	187.9	7.399	2.070	2.740	1506	1.	48.69
Belgian Franc 100	1.378	1.478	4.962	385.9	15.20	4.252	5.627	3092.	2.054	100.

EURO-CURRENCY INTEREST RATES (Market closing rates)

Mar. 1	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	D-mark	French Franc	Italian Lira	Belgian Franc Conv.	Belgian Franc Fin.	Yen	Danish Krone
Short-term	14⅛-14⅜	8⅝-8¾	10¼-10¾	6⅛-6⅜	8-3¼	6-6⅛	10½-10⅝	13-14	10-10¼	9⅞-10⅛	8⅛-6⅛	11⅛-11⅜
7 day's notice	14⅛-14⅜	8⅝-8¾	10¼-10⅝	8⅝-6⅜	2⅞-3⅛	5⅞-6⅛	10⅛-10⅝	14⅛-16⅜	10⅛-10¼	10⅛-10⅜	6⅛-6⅛	10¾-11¼
Month	14⅞-14⅞	8⅞-9⅛	10⅞-10⅞	6⅞-7⅛	6¼-3⅛	6 6⅛	10⅝-10¾	14½-16	10⅛-10¼	10⅝-10⅞	8⅛-6⅞	10⅞-11⅛
Three months	13⅞-14⅛	9⅞-9⅛	11⅛-11⅛	7⅛-7⅛	6⅛-5⅛	6⅛-8⅛	11⅛-11⅛	16-18⅛	10⅝-10⅞	10¾-11	6⅛-6½	11-11½
Six months	15⅛-16⅛	10⅛-10¼	22⅛-12⅛	7¼-7⅜	6¼-5⅛	6⅛-6⅛	11⅝-11⅝	10⅝-15¾	11-11¼	10⅞-11⅛	6⅛-6⅜	-11-11⅛
One year	12⅞-13	10⅛-10⅛	18½-12¾	7⅜-7⅛	6⅝-6¾	6⅝-6¾	12-12⅛	16-16½	11⅜-11⅝	11-11¼	6⅛-6⅛	11¼-11¼

Asian $ closing rates in Singapore): Short-term 8⅞-8[illegible] per cent; seven days 8[illegible]-8[illegible] per cent; one month 8⅞-9 per cent; three months 9¼-9⅛ per cent; six months 10[illegible]-10[illegible] per cent; one year 10⅛-10⅞ per cent. Long-term Eurodollars: two years 11⅛-11⅞ per cent; three years 11⅞-12⅛ per cent; four years 12⅛-13⅛ per cent; five years 12⅛-12⅞ per cent nominal. Short-term rates are call for U.S. dollars and Japanese yen; others two days' notice.

MONEY MARKETS

Mood for optimism evaporates

Interest rates finished the week little changed in London, after falling quite sharply on Wednesday as sterling recovered from record lows against the dollar and on the Bank of England's exchange rate index. Three month interbank was steady on Monday and Tuesday at around 14⅝-14¾ per cent, as the pound touched $1.0360 on the foreign exchanges, and the index reflecting movements against a basket of currencies slumped to 70.0 at one point. As this was more a reflection of the dollar's strength than sterling's weakness, the money market kept its head and there was no sign of panic.

UK clearing banks base lending rate 14 per cent since January 28

It was not until the pound recovered to around $1.0875, after touching a peak of $1.1070, that interest rates showed much movement. As the Bank of England intervened with other central banks to push the dollar down, three-month interbank fell to 13½-13⅝ per cent at one time on Wednesday, before finishing at 13⅞-13⅞ per cent.

This appears to indicate that the market still sees downward potential in London interest rates, providing the pound can stabilise well above parity with the dollar, but that there is little fear of another rise in base rates, even if renewed dollar strength means sterling moves back down towards record lows.

On the other hand the pound did show signs of weakening on its own account towards the end of the week, as attention turned back to the oil market and the growing differential between the spot market and the official price for North Sea oil.

London interest rates had already rebounded on Thursday, as Wednesday's drop appeared to be overdone and remained liable to upward pressure on Friday as sterling fell to DM 3.60 and FFr 11.0250, as well as sliding back against the dollar.

Rates on Friday were back around 14 per cent compared with 14⅛ per cent at the end of the previous week, as the mid-week spell of optimism had largely evaporated.

MONEY RATES

March 1	Frankfurt	Paris	Zurich	Amst'dam	Tokyo	Milan	Brussels	Dublin
Overnight	6.00-6.10	10⅛	9⅝-9⅝	7-7¼	6.28195	16⅝-16	5.40	14⅝-14⅞
One month	6.00-6.20	10⅝-10¾	6⅞-3⅞	6⅞-7	6.68196	16¾-16⅛	10⅝-10⅞	14⅝-14⅞
Two months	6.06-6.26	10⅞-10⅞	—	—	—	—	—	14⅝-14⅞
Three months	6.15-6.30	10⅞-10⅞	6⅛-3⅛	7-7⅛	6.34375	16-16⅛	10¾-11	14½-14¾
Six months	6.40-6.55	10¾-10⅞	—	7⅛-7⅛	—	—	10⅞-11⅛	14⅝-14⅝
Lombard	6.0	—	—	—	—	—	—	—
Intervention	—	10⅛	—	5⅝	—	—	—	—

LONDON MONEY RATES

Mar. 1 1985	Sterling Certificate of deposit	Interbank	Local Authority deposits	Company Deposits	Market Deposits	Treasury (Buy)	Treasury (Sell)	Eligible Bank (Buy)	Eligible Bank (Sell)	Fine Trade (Buy)
Overnight	—	13-16	—	12-14¼	10-14	—	—	—	—	—
2 days notice	—	—	14⅛-14¼	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	14⅛-14¼	14⅛-14⅜	14⅛-14¼	13⅞	—	—	—	—	—
One month	14⅛-14⅛	14⅛-14⅜	14	14⅛	14⅛	—	16⅛	13⅞	13⅞	14⅛
Two months	14⅛-13⅞	14⅛-14¼	14	14⅛	13⅞	—	16⅛	13⅞	13⅞	14⅛
Three months	13⅞-13⅞	14⅛-14¼	13⅞	13⅞	13⅞	—	13⅞	13⅞	13⅞	14⅛
Six months	13⅞-13⅞	13⅞-14	14⅛	—	—	—	—	13⅞	13⅞	—
Nine months	13⅞-13⅞	13⅞-14	—	—	—	—	—	—	—	—
One year	13⅞-13⅞	12⅞-13	—	—	—	—	—	—	—	—

Discount Houses Deposit and Bill Rates

	Local Auth. negotiable bonds	Local Authority Deposits	Finance House Deposits	$ Cert of Deposits	SDR Linked Deposits	ECU Linked Deposits
One month	14⅛-14⅛	—	14⅛	8.8-8.9	6⅞-6⅞	9⅞-10⅛
Two months	14⅛-14⅛	—	14⅛	9.25-9.35	8⅞-8⅞	10⅛-10⅛
Three months	14⅛-13⅞	—	13⅞	9.30-9.40	8⅞-8⅞	10⅛-10⅛
Six months	14⅛-13⅞	—	13⅞	10.1-10.2	9⅛-9⅛	10⅛-10⅛
Nine months	13⅞-13⅞	—	—	10.5-10.7	9⅛-9⅛	—
One year	13⅞-13⅞	—	13⅞	—	—	—
Two years	—	12⅞	—	—	—	—
Three years	—	12⅞	—	—	—	—
Four years	—	12⅞	—	—	—	—
Five years	—	12⅞	—	—	—	—

ECGD Fixed Rate Export Finance IV: Average Rate of interest period January 2 to February 5 1985 (inclusive): 11.840 per cent. Local authorities and finance houses seven days' notice, others seven days' fixed. Finance Houses Base Rates (published by the Finance Houses Association): 12½ per cent from March 1, 1985. London and Scottish Clearing Bank Rates for lending 14 per cent. London Deposit Rates for sums at seven days' notice 11-11¼ per cent. Treasury Bills: Average tender rates of discount 13.4035 per cent. Certificates of Tax Deposit (Series 6): Deposits £100,000 and over held under one month 14 per cent; one-three months 16⅛ per cent; three-six months 13½ per cent; six-nine months 13 per cent; nine-12 months 13½ per cent. Under £100,000 11½ per cent from February 12. Deposits held under Series 5 12 per cent. The rate for all deposits withdrawn for cash 8 per cent.

NEW YORK (4 pm)

Prime rate	10½
Broker loan rate	9⅞-9⅞
Fed funds	8⅝
Fed funds at intervention	8⅝

Treasury Bills

One month	7.86
Two month	8.36
Three month	8.66
Six month	8.81
One year	8.98

Treasury Bonds

Two year	98⅞
Three year	99⅞
Four year	99⅞
Five year	99⅞
Seven year	99⅞
10 year	99⅞
30 year	99⅞

FT LONDON INTERBANK FIXING

(11.00 a.m. March 1)
Three months U.S. dollars

bid 9 1/2	offer 9 5/8

Six months U.S. dollars

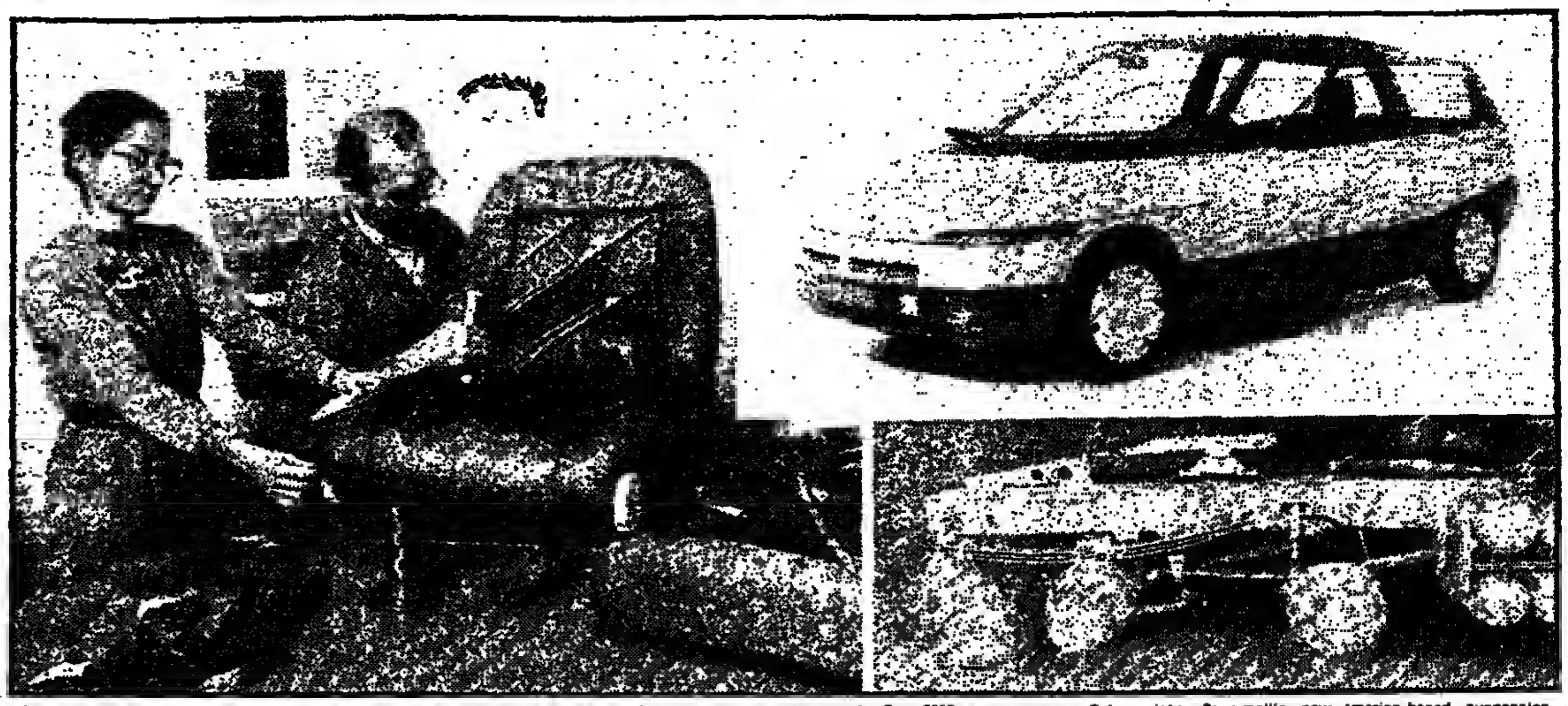
bid 10 1/16	offer 10 5/16

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

FINANCIAL TIMES SURVEY

Vehicle Design

The pace of innovation continues to accelerate against a background of over-capacity, fierce sales battles and ever increasing Japanese penetration of world markets.



Making up a new seat design at the Citroen Styling Centre near Paris, and (top right) the company's Eco 2000 concept car. Below, right: Scammell's new traction-based suspension.

By JOHN GRIFFITHS

DESIGN AND innovation in the vehicle-producing world acquired a completely new dimension at the beginning of January.

It was then that Mr Roger Smith, chairman of the world's largest vehicle producer, General Motors, announced not only GM's plan to produce an entirely new car for the late 1980s, but an entirely new, designed from the ground up manufacturing complex to produce it and even the launch of a new corporation to bring the project to fruition.

The Saturn Corporation has as its goal the production of a new generation of small cars which, for the first time, are intended to wipe out the $1,500 per unit cost advantage that Japanese manufacturers have achieved in the sector.

It involves a redesign of the production process from scratch, and has entailed GM in taking stakes in an array of high-technology electronics and robotics companies—not least the acquisition, for $2.55bn, of Electronic Data Systems, the largest data-processing group of its type in the world.

GM's massive programme for Project Saturn provides a vivid illustration of the enormous pressures being created by the technology race as the world motor industry moves towards the 1990s.

And the proliferation of technology already available is only a foretaste of what is to come. As Mr Smith himself pointed out earlier last year, no one in the industry yet has a clear idea of what technology will be available by the end of the century — not far off in motor industry strategic planning terms—by which time the world's "storehouse" of knowledge is expected to have doubled from its present level.

"We've barely begun to discover how many ways advanced electronics can be used in cars and trucks," he pointed out. And the same can be said for how the vehicles are produced. The Saturn project will take GM well down the road towards a computer integrated manufacturing system, and may see it emerge as the first large "paperless" corporation, with virtually all aspects of business within the company handled by electronic data transmission.

But, what the limits of integration are—in theory it could eventually be possible to make complete cars automatically with just the initial design function taken care of by humans—no-one can clearly foresee. All of which throws an enormous burden on the design process, which now extends far beyond the traditional role of designers, to conceive consumer-acceptable cars and trucks. The drawing board has long since been replaced by the computer screen. And what is conceived there now stretches deep into the production process.

Increasingly, the database created by the vehicle designer is being used to create the production tooling. Outside component suppliers are being integrated into the same system, for instant access to what is being required of them. Simultaneously, the vehicle design process is being internationalised. The classic example again lies with GM. Designers at its world truck and bus operation, headquartered at Pontiac, Michigan, have their screens inputting directly to its mainframe computer. In turn, the Pontiac mainframe is linked directly to a mainframe at GM's Bedford commercial vehicles subsidiary at Luton, England.

That computer is linked directly to the screens of the team of Bedford designers who are making their contribution to the first of the generation of "world" commercial vehicles GM is planning for the late 1980s.

At any given time, a Luton designer working on any part of the vehicle can see instantly what a counterpart in Pontiac is up to, and where it affects his own function.

Technology-based innovation within the vehicle itself has accelerated rapidly since the start of the 1980s, is increasing and will do so for the forseeable future. Electronic management of engines for maximum efficiency and fuel economy is becoming commonplace; electronically controlled automatic gearboxes, already available, are to be followed in the near future by continuously variable transmissions which will change the vehicle's speed while allowing the engine to operate continuously at its own most efficient speed.

Four-wheel drive, electronic anti-skid braking systems, even computer-controlled suspension systems—allowing the driver to choose between hard and soft settings at the flick of a switch—are already moving from the preserve of specialist executive car producers towards the cheaper, volume sector.

Next year, BMW will launch cars whose principal operating systems will be controlled by an electronic "ring main," which will have the capability to diagnose and bypass, any operating faults which develop. Fibre optics and "multiplex" wiring systems linking computerised control systems dispersed around the car will spell an end to yards of heavy, conventional wiring looms.

Long as the list of technology options is, it will grow much longer yet as new materials like ceramics and plastic composites come more into play. And, there is something of an industry consensus that by the middle of the 1990s, the industry will have moved away from conventional steel-bodied cars to ones with light metal skeleton frames clad in plastic panels, the moulds for which will be cheap and allow manufacturers to produce a much greater variety of models and change their shape more frequently.

Considering the enormous investments at stake—GM, for example, reckons it needs to spend $7bn a year over the next few years to stay world-competitive, particularly in the face of competition from Japan—the need for manufacturers to make the right choices in design and technology terms hardly needs stressing.

They have already learned that consumers are not necessarily prepared to accept every innovation with round-eyed wonder. Buyer resistance is already causing a retreat by some manufacturers from voice synthesised information systems and colourful, but sometimes confusing, electronic dashboards.

But, there are opportunities as well as risks. For example, Mr Merrick Taylor, managing director of Motor Panels (Coventry), which supplies truck cabs for assembly by vehicle producers around the world, says he believes the time is ripe for manufacturers to encourage a change in attitude towards the vehicles they produce.

The truck industry, he suggests, has been obsessed with cost-cutting and rationalisation and truck operators concerned only with operating costs.

"Yet when you think about it, there's nothing more promotable than a truck."

Selling trucks with an up-market image is already happening in the U.S., he suggests, with "customised" heavy trucks. Styling, aerodynamic efficiency and other aspects of truck design could be upgraded to the point where operators would no longer buy on price alone.

Mr Taylor insists that independent companies such as his own can survive and flourish in the motor industry, despite the greatly enhanced "in-house" design capabilities presented to vehicle makers by computer technology. Design and engineering consultancies, typified by Lotus International Automotive Design and Ogle in the UK, and Pininfarina, Ital Design and Bertone in Italy, still have a vital role to play, insist people such as IAD's chairman, Mr John Shute.

Manufacturers will continue to use them because they can respond quickly and flexibly to prototype development and R and D requests, and because they offer independent creative design concepts on which computers can only elaborate, not originate.

If anything, the burden on the specialist design and engineering houses is increasing, with much new business coming from Japan. Indeed, the determination of the Japanese to match, and even overtake, European vehicle producers in overall design sophistication is a source of strong concern to European makers.

Finance by UK Government of R & D expenditure in private industry

	% of total 1975	1978	1981
All manufactured products	34	32	34
Chemical and allied products	3	—	1
Mechanical engineering	7	6	13
Electrical engineering (including electronics)	44	48	49
Of which: Electronics	52	53	50
Motor vehicles	1	4	1
Aerospace	82	72	68
All other manufactured products	6	5	7

Source: Business Monitor (H.M. Government)

Era of the practical testbed

Concept cars

JOHN GRIFFITHS

IN THE 1960s and 1970s, "concept cars" tended to be equated with the wilder flights of fancy of the specialist design houses, mainly based in Italy.

They were mainly exterior and interior styling exercises, in which looks and apparently aerodynamic sleekness outweighed considerations of practicality.

In the 1980s, however, such cars have undergone considerable change.

As the technology options available to manufacturers — embracing electronics, drive-trains, new materials and new construction methods — have proliferated rapidly, so concept cars have taken on a more important role.

Increasingly, they are being used to package these new technologies in combinations, and within body shells, which sometimes can quite closely reflect the vehicles likely to be entering production at the end of the decade or during the 1990s.

The best illustration of this new approach to the concept car was provided by Ford during 1981-82, when it trailed its Probe III model round the motor show circuit.

The Probe had many features which have yet to appear on Ford's production cars, such as a fully streamlined underfloor, with airflow-disrupting items such as the exhaust system fully recessed out of the airstream, and a drag-reducing front air dam which automatically lowered itself as the car gathered speed.

But they were housed within what was essentially the body of the Sierra. So during the many months in which Probe III was on public view, Ford gained much valuable feedback.

Only time will tell if some of the latest crop of concept cars reach the production line in forms so closely linked as Probe III and Sierra. But it is certain that elements, at least, of the cars will appear on the production line.

The latest concept car to arouse a great deal of interest has come from Citroen: the ECO 2000. Like BL's ECV 3 first shown more than two years ago, the ECO is very much a working model with full roadgoing capabilities.

In fact, there are four prototypes produced on the ECO 2000 theme, which represent Citroen's thinking on how replacements to its ancient, slow but economical 2CV model may have evolved by the 1990s.

A principal target of the ECO project was to build a four-seater car capable of 94 miles per gallon fuel economy — based on an average of urban driving and constant 56 and 75 mph cruising speeds — by 1986. The project is estimated to have cost some £30m, with the French Government footing half the bill as a way of encouraging development of more economical cars.

The work has been carried out by a team of engineers drawn from the entire Peugeot group, who together make up the Directorate of Research and Scientific Affairs.

The principal roadgoing version of the four cars, the SA 109, takes the group a long way towards their target. It uses a three-cylinder engine of 750 cc, based on the one-litre four-cylinder "Fire" engine now being produced jointly by Peugeot and Fiat for existing models.

Drag coefficient

In spite of an output of only 35 brake horsepower, the engine is powerful enough to propel the car from standstill to 60 mph in 18 seconds, with a top speed of 87 mph.

This performance, allied to a current average fuel consumption of 80.7 mpg, is made possible by the fact that the aerodynamic drag coefficient is only 0.21 — the Renault 25, which claims to be the lowest-drag car in commercial production, *has one of 0.28* — while weight has been pared to 480 kg, or little more than half that of a current small hatchback.

The low drag is partly a function of the very futuristic "teardrop" shape, partly due to the fitting of window glass flush with the bodywork, a smooth underbody and a design greatly reducing air drag through the cooling system.

The weight reduction arises primarily from the use of glass-fibre reinforced plastic bodywork on a steel platform and skeleton structure. By having a light body, the car can use lighter mechanical components and a smaller engine, to provide similar performance to a small, much heavier existing car.

By making further refinements — a plastic gearbox casing is being studied, for example — Peugeot's engineers think they will be able to reach the 1986 fuel consumption target.

So what is to stop the vehicle itself going into production? First the GFRP body does not lend itself to volume manufacture, although Citroen has begun moving down the road towards plastic-bodied cars (its larger BX saloons already have plastic bonnets and tailgates).

Second, the vehicle would need further refinement in terms of noise reduction (almost by definition a weight-adding process).

Third, its styling might prove rather too much of a culture shock, given the nature of the 2CV model it would replace—quite apart from considerations of the capital investment needed for a vehicle where engine, transmission and bodywork would be new simultaneously.

What the ECO 2000 does illustrate, however, is what can be achieved by means of refining existing vehicle technologies, without even recourse to the diesel engine, and its traditionally much-improved fuel consumption compared with petrol units.

Concept cars are not confined to being produced by the vehicle manufacturers themselves, or the specialist design houses. One of the more interesting to appear seemed to be a straightforward production Lancia Delta hatchback.

Beneath its skin, however, were 23 microcomputers responsible for operating virtually all the car's systems, right down to remembering the preferred seating position of a driver and adjusting it accordingly.

It was semiconductor giant Motorola's way of mapping out the possibilities presented by electronics within the car, and many of those microprocessor features are already appearing in manufacturers' vehicles.

Not quite into production cars yet, however, is the 75 metres of multiplex wire and fibre optic system Motorola used in lieu of 500 metres of conventional wiring.

The Japanese have been particularly active on the concept cars front during the past 18 months. And Mazda is making no secret of the fact that many key ingredients of its MX-02 car, shown at the Birmingham Motor Show in October, will appear in its production models in the second half of the decade.

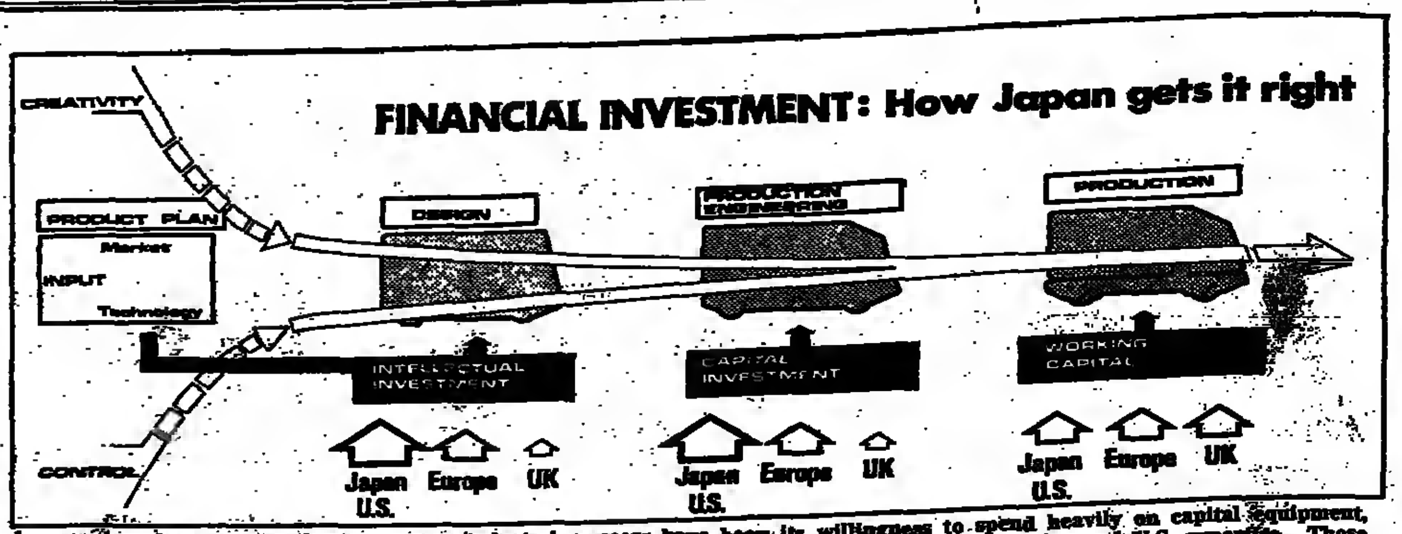
The MX-02 makes considerable use of plastic composites, but its most attention-grabbing aspect by far is its four-wheel steering. This allows the wheels to be turned in parallel with each other at low speeds, thus letting the driver move crab-wise into a restricted parking space, for example.

The computer-controlled driver entry system, conforming the specification set out by Motorola, requires the driver to press a sequence of electronic pads to gain access to the car, then automatically adjusts the driving controls to up to 10 pre-selected combinations.

The car is a classic example of a manufacturer incorporating a range of new ideas in a concept vehicle, then using it through all stages of road testing to demonstrate that the technology is viable.

Several of the concepts pioneered within the MX-02 are already undergoing evaluation in versions of Mazda's current-production 626 saloon.

Toyota similarly claims that many of the features of its FX-1 will find their way into production. The specification includes a 0.25 drag coefficient, doors which swing forward as *well as outwards for easier* access, and an all-glass superstructure.



Two key elements in the Japanese motor industry's success have been its willingness to spend heavily on capital equipment, and to make up for surviving deficiencies in its own innovative capabilities by buying in European and U.S. expertise. Those involved in innovation in Britain share a consensus view that while funding is not difficult to obtain for working capital, there has to be a marked shift to substantial new capital investment and "intellectual" investment—support for research and development, and to encourage new generations of creative designers and engineers—if the UK industry is not to slip irretrievably behind.

Plastic car a step closer to production

New materials

JOHN GRIFFITHS

WITHIN a fenced and barbed wire complex covering 1,000 acres deep in Britain's countryside, BL Technology is advancing the plastic car built on a lightweight metal frame from being a concept towards production reality.

There is a consensus within much of the motor industry that this is the design route which production cars of the 1990s will follow. And several concept cars, including the first of BL Technology's ECV3 prototypes shown two years ago, illustrated what they might be like.

However, manufacturers — and until now BL Technology — have been reticent about what forms the manufacturing process might take, and precisely how the costs of producing such cars might shape up against conventionally produced vehicles.

At the time that ECV3 was first shown, Mr Harold Musgrove, chairman of BL's volume cars business, Austin Rover, warned that such cars meant a "revolution" in manufacturing technology. An industry whose expertise was based mainly on the fabrication of metals, he suggested, would have to relearn much of the whole process of making cars.

BL Technology, in partnership with the Alcan group, has now developed the structure of *a manufacturing system to allow* volume production of cars with aluminium skeleton frames, clad in plastic panels and with adhesives substantially replacing welding in the manufacturing process.

Higher cost

Aluminium's intrinsic advantage over steel, of much less weight for the same strength, is offset by its substantially higher cost as a raw material. But Dr David Kewley, BLT's chief engineer, advanced materials and processes, says the difference in cost per chassis of about £100 — measured by materials cost only — could be cut as the result of investment in major capital items such as welding and other "conventional" plant being much reduced.

This is at the manufacturing level, but much lower fuel consumption made possible by lighter body weight (in turn allowing smaller, lighter drive-trains and components to be used).

The other principal element in the equation is the use of plastics for body panels. There has been much debate over their economics, both as regards raw materials costs and the fact that plastics cannot be instantly stamped out like sheet metal, thus hindering in time terms, and increasing the costs of, the manufacturing process.

Dr Kewley says much still depends on further development of processes. Currently, there are cosmetic problems with cheaper plastics which, he says, could already be used, and at only four-fifths the cost of steel panels. To adopt the current high quality thermoplastics, however, could increase the cost relative to a steel panel by 150-200 per cent.

But with injection moulding cycles now down to 90 seconds or so, the time element problem has all but disappeared. And the use of self-coloured injection moulded plastics could turn the presumed cost disadvantage of plastics on its head if paint plants, another *highly capital intensive production area*, were to be eradicated.

The advantages of switching to the aluminium/plastic formula are considerable, not least in marketing terms. Panel moulds can be produced far more cheaply than pressing equipment for steel sheet ones. "New" models could be introduced at a much faster rate than hitherto, simply by hanging on different panels.

ECV3, now "stretched" in its engine size from the original 1.1 to 1.2 litres, and using prototype petrol and comprex supercharged diesel units, demonstrates some of the future potential.

It weighs just 664 kilogrammes, in full roadgoing trim, and with room for five. Despite its small engine size, it has a top speed of around 115 mph and standstill to 60 mph acceleration time of around 11 seconds with fuel consumption of 49 mpg in the urban cycle and 81 mpg at a constant 56 mph.

The use of adhesive bonding, rather than aluminium welding, is a key ingredient in the vehicle's strength.

Meanwhile, the use of other new materials in the car is proliferating.

In 1982, Toyota began using fibre-reinforced metal for diesel engine piston ring grooves. The best-known use *of FRM* is in structural members of the Space Shuttle, where high strength and light weight are required. The most common fibres used are alumina, alumina/silca, carbon and boron, distributed through mainly magnesium and aluminium. FRM mixes can be made to fit the exact requirements of design engineers—and with a density less than half that of steel, it has a wide variety of potential applications, including engine parts.

Steel-plastic laminates — a sheet of plastic in a steel sandwich—are lighter than steel, have the same strength, but improved noise and vibration suppression qualities.

Ceramics increasingly are finding their way into engines, their high heat resistance making them useful for pistons, cylinder sleeves, valve inserts and so on.

One of the more intriguing developments relates to shape memory effect alloys. Raychem, the research-based U.S. corporation, has developed at its subsidiary at Swindon actuators capable of performing a variety of tasks, such as opening shutters, operating doors or windscreen wipers using the "shape memory" alloy's characteristics.

The alloy is of nickel-titanium, in the form of a coil spring. By passing a small current through the extended spring, the consequent rise in temperature makes it retract to its "remembered" shape, with a strength 6-10 times that of its unheated form. When it cools, which happens in a second or two, only a slight force (an auxiliary spring) is needed to re-extend it. Raychem believes the devices will save a considerable amount of vehicle weight through, for example, the elimination of the heavy electric motor needed for windscreen wipers.

Vehicle design 4

Japanese producers are pushing hard into any likely export market, a factor which all European and U.S. makers must reckon with

Styling in pursuit of new markets

The U.S.

TERRY DODSWORTH

A COUPLE of years ago, a U.S. magazine scored a deadly hit against the paucity of new ideas in American car design when it published a photograph of a range of General Motors' mid-sized cars. The vehicle came from all five divisions of the GM empire—Cadillac, Pontiac, Buick, Oldsmobile and Chevrolet—yet apart from a few cosmetic differences they looked virtually identical.

GM's divisional structure was admittedly created in the first place to hit various market niches using products which shared similar engineering. But this cost-cutting blueprint had depended for its 50-year span of success on the ability of the car designers to give an illusion of product differentiation.

By the late 1970s, the vitality of this tradition seemed to have been lost. Indeed, it had eroded away to such an extent that one of the main tasks the company's top management has set itself since then is to restore a sense of style and innovation throughout the corporation.

What is true for GM also goes for its two main U.S. competitors. Ford has emerged in the last few years with the bulk of a new range of vehicles cast in a sleek, rounded, aerodynamic shape. They are cars which suggest that the company is adapting to the economic demand for more fuel efficiency; but they also give the number two group in the U.S. a model range which is clearly different from GM's.

Chrysler, after its long flirtation with bankruptcy, has equally based is resurgence on design and styling innovation. The "K" model range, the launch of which in the early 1980s came to the rescue of the company in the nick of time, is highly distinctive, using snappy, squared off lines which are unmistakable on the roads.

Chrysler took a big gamble with these cars, sold under its Dodge and Plymouth badges. They plunged the company into front-wheel-drive technology, but at the same time the company has aimed to reproduce the smooth drive characteristics that are typical of larger American cars.

Chrysler took an even bigger gamble when it launched its minivan at the beginning of last year. This is the sort of hybrid which designers bave looked at for years, but which companies bove rarely had the courage to back.

Measured in terms of floor space, it is no larger than the "K" cars. But in carrying capacity it is considerably larger, since it uses a van-type shape to gain cubic capacity both vertically and to the rear, where it dispenses with the traditional boot.

It can carry at least seven people on three ranks of seating, yet is nifty enough to be used as a town runaround.

The impact of the minivan has become immediately apparent in the steady stream of rival offerings. Toyota has its own version, General Motors has launched two competitors, the Chevrolet Astro and the GMC Safari, and Ford is bringing out its sleek Aerostar later this year.

Chrysler, which still has pole position in the market, partly because it brought out its model first, sold 200,000 units of its compact van last year, and aims to be making 400,000 within two years. By the end of the decade, analysts are talking about a market for minivans that may have grown to around 1m vehicles a year.

All the big three U.S. manufacturers have also geared up in the last couple of years to attack more "niche" markets. This strategy derives partly from the success of imports, which bave demonstrated bow both the Japanese and European manufacturers have been able to attract discrete groups of Americans with cars of a somewhat specialised appeal.

The current thinking in Detroit is that car markets in the future will tend to become more fragmented and volatile in taste, thus demanding more precisely targeted products.

One striking result of this way of thinking is the Fiero model from GM's Pontiac division. Launched in 1984, this sporty mid-engined two-seater, styled in a wedge shape which is reminiscent of the Mazda RX-7, was aimed specifically at the "yuppie" market—the young, professional executives who have probably done the best financially out of the current economic boom in the U.S.

In its first year on the road, the Fiero sold 100,000 units, making it a runaway success for a vehicle of its type.

The take-off of the Fiero, following the success of the Mazda sports car and the Mercedes-Benz 380SL at the top end of the market, has unquestionably revived interest in dramatic styling variants, often with e European tinge.

All the big three manufacturers are planning cars designed by the famous Italian studios—Ford is to market a two-seater from the Ghia studios in Turin, GM will be launching an up-market Cadillac styled by Pininfarina, and Chrsyler is to bring out a two-seater sports car designed by De Tomaso.

Perhaps the biggest challenge for U.S. designers, however, will be their success in creating a new generation of small cars to compete with the imports from Japan and, increasingly, Korea.

Led by GM, the U.S. manufacturers are now moving towards radical design solutions as an answer to the Japanese—an approach which may become essential if the restraint system is dropped, as it may be in the spring.

The General Motors Saturn project, announced with a great deal of brouhaha earlier this year, is now well down the road towards completion.

Mock-up models of the car GM is aiming to produce have already been shown, and these are expected to give a rough idea of the final product—a car which looks very much like the compact vehicles coming out of Japanese and European design studios today.

But the revolutionary aspect of Saturn is expected to be less in the styling—which will be aimed at pleasing a mass market—than in the way it will be engineered and produced.

GM engineers are aiming to jump a number of barriers on the Saturn project, which is expected to cost around $5bn.

The factory floor will be divided into smaller work units, encouraging a teamwork concept.

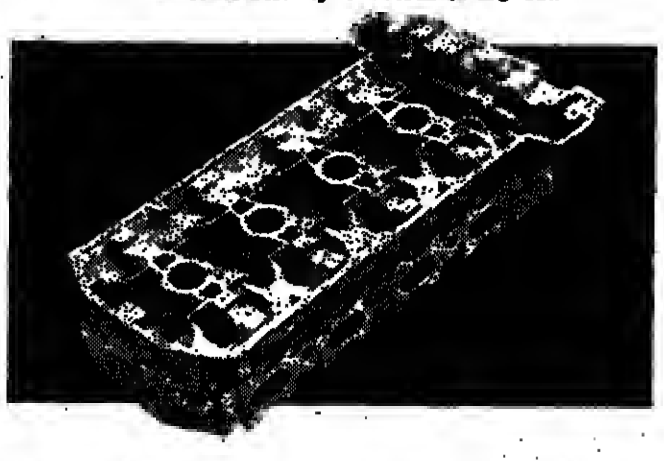
The backroom will be highly computerised, so that the whole unit can be linked through a common, paperless network. And the engineering of the vehicle will be such that units of tha car, or "modules," can be put together separately and later unified.

The Saturn project is a monumental challenge, which could easily fail to meet its very ambitious targets of launching the U.S. industry on a new course. But when a company the size of GM changes direction, it inevitably has a galvanising effect on everyone around it, and Ford and Chrysler are now moving in the same direction.

Both the smaller groups have their own, equivalent compact car projects. Both are trying to negotiate agreements with the United Auto Workers union that will permit the new production methods. And both are working on similar design ideas.

Whether they can carry off the counter-attack against the Japanese, or whether they will be forced back into a compromise of importing smaller vehicles from their affiliates overseas, is the biggest question hanging over the U.S. industry today.

Top: Pontiac Fiero has plastic body panels developed with Bayer. Above: Honda Prelude, Europeanised car that exemplifies Japan's determination to fully understand the European market. Below: intricate cylinder head casting made for Mercedes-Benz by Cosworth of the UK.



Warning on dangers of automation

Europe

JOHN GRIFFITHS

EVEN THE Japanese would be obliged to agree, if reluctantly, that the European vehicle industry, particularly that of West Germany, maintains an overall lead in design sophistication, however short-lived it may turn out to be.

With the exception of the more specialised executive car producers, however, continued research and development needed to maintain that lead is taking place for volume producers in Europe against the background of excessive overcapacity, fierce sales competition and an associated difficulty in generating adequate investment revenue.

So much of the industry's design and innovation effort has been going into the development of production systems aimed not just at further qualitative improvements, but at paring unit costs markedly.

For in much the same way as General Motors in the U.S. has embarked on its Saturn project—to produce small cars for the late 1980s as cost-effectively as the Japanese—so European producers have been becoming increasingly uneasy at the prospect of unrestricted competition from "state of the art" Japanese "greenfield" plants as planned by Nissan in the UK.

But have, in fact, European makers seeking to emulate Japanese production practices got it all wrong? Motor industry analyst Mr Dan Jones, Senior Research Fellow at the Science Policy Research Unit, University of Sussex, believes there is a danger of this, and offers an explanation why:

"For a start, the notion that you can automate yourself out of trouble is the biggest myth that is going to explode in this industry over the next few years."

Controversially, he picks on Volkswagen's Hall 54, the production centre for the Golf, as an example.

Hall 54 is Volkswagen's showcase plant at Wolfsburg, which has been turning out the latest Golf II model since late 1983 at e rate of more than 2,000 a day. It was built and equipped at a cost of DM 550m ($165m).

The plant has allowed VW to lift automation of some production processes to 90 per cent, with the biggest proclaimed advance the increasing of automated operations in the assembly process to over 25 per cent from 5 per cent on the first Golf model.

It expects automation in this area to exceed 30 per cent by 1990, with 2,000 robots installed by then against the current 1,200-plus. The increased automation theoretically accounted for removing 1,000 jobs, though the plant still employs about 2,000, many involved in overseeing the operation of the plant rather than tied, as in the past, to operating machinery.

However, Mr Jones suggests that Hall 54 "is not an example that people are going to follow in a hurry. Why? Because you are turning your variable cost into e fixed cost.

"The level of indirect labour you need to keep that line working is incredibly high. So you have got rid of direct labour, but you are having to employ more indirect labour, which is expensive. So your cost base isn't reduced substantially and at the same time you have got incredible restraints on design."

The effect in such plants is the opposite of the intended improved flexibility. This washes over into the product itself, he argues, in that the design is compromised as a product through being designed around the production process, while the plant is vulnerable to stoppage in the event of automated equipment failure.

Any manufacturer blindly pursuing such a course, he insists, "is never going to get the return on such investment."

Mr Jones, a participant in the Massachusetts Institute of Technology's major four-year research programme into the future of the world's motor industry (which was supported by all the major vehicle makers), insists instead that the productivity and cost advantages of the Japanese production systems were arrived at entirely separately from automation, and that for the European industry to automate and robotise production offers absolutely no prospect of closing the gap.

"The Japanese achieved their reduction in labour costs, and the fewer hours needed, long before automation came in. The European industry has got to go back to the basics:

"Organising the plant, organising the workflows, making the plant flexible, cutting tooling change-over times. You can achieve phenomenal productivity improvements by doing that. And then you can introduce automation, but to improve quality, not to automate yourself out of financial difficulty.

"That's the real trouble. After all this time, the European industry bas still only half-digested the Japanese production management lessons."

It seems almost incredible that Europe, and the UK in particular, could bave watched the annihilation by Japan of much of the European motorcycle industry, yet still cling to the view until fairly recently that—except in terms of production costs—its cars would never quite match up to the design, dynamic and technology standards being set by European car producers.

The first Japanese motorcycles to arrive in Europe in the late 1950s were cheap—but almost a joke in terms of styling and handling. The then-world leading UK industry, to its cost, treated them as such, while the Japanese continued to develop them at a furious rate.

Long after all serious competition to Japan's domination of world markets has disappeared, continuing competition between Japan's four main prodncers has refined Japanese motor-cycles into engineering masterpieces incorporating a high degree of advanced technology.

Japan's vehicle industry is accelerating down the same route. Precisely what point it has reached is hard to tell. Currently, its leading manufacturers are making much of individual areas of innovation,

CONTINUED ON PAGE 5

Performance cars at the forefront

Japan

IAN ROBERTSON

JAPAN REGULARLY exports more than half the 11m vehicles it produces each year. Overseas assembly is also building up rapidly—Nissan alone assembled more than 500,000 vehicles in its foreign plants in 1984

Honda now sells twice as many cars on the U.S. market as it does in Japan. Inevitably, this emphasis on international markets has had e substantial impact on the design of vehicle produced.

Along with intense competition and a strong yen (U.S. market apart) import restraints have combined to push the Japanese product upmarket in search of healthier margins—as in the performance derivatives of saloons and small hatchbacks.

Companies such as Toyota, Nissan, Honda and Mitsubishi have demonstrated great flair recently in identifying other more profitable sectors and thereby creating their own specialist niches in the market. Four-wheel drive "leisure" vehicles are an example of this strategy; "people carriers" are another. The microvan, originally pioneered by Daihatsu in the 1950s, has been adapted for selected markets overseas. Japanese products dominate the pick-up sector.

Most recently, Japan has been capitalising on its drive towards performance machinery with a volume range of two-seater (and 2+2) sports cars. Reduced competition in each of these sectors enhances the prospects for unit earnings. The price of Toyota's mid-engined MR2, for example, is about 25 per cent above that of the Corolla GT front-wheel drive saloon on which it is based.

Advanced computer-controlled flexible manufacturing systems have assisted this development. By enabling Japan's existing production lines to switch from one model to another, they have redneced the volume ot which output becomes profitable.

Unfortunately, Japan's attempts to devise a common denominator—a car acceptable to widely-divergent world markets—have led to allegations of blandness in the final product. By image transfer, it is intended that these latest performance cars should boost the identity of more mundane models above the "dull but dependable" level.

With this in mind, Toyota has set an annual production target of 40,000 units for its MR2 model. Production of this 2+2 Silvia Turbo is booming at Nissan's Kyushu plant, and now Subaru is gearing up for tho European launch of a turbo-charged 2+2 sports car with four-wheel drive.

Nissan is developing a high-performance mid-engined sports car for launch late this year. It features four-wheel drive, advanced electronics and a twin turbocharged engine in a plastics body. Another four-wheel drive sports car is expected soon from Honda. Again the body will feature widespread use of plastics.

The proliferation of overseas assembly plants is expected to sharpen Japan's competitive edge in an important new way. As volume builds up — in Nissan's 100,000 units a year UK Phase 2 for example—it is expected that there will be e marked trend towards local styling by international offshoots. At this stage, the UK-produced Stanza could well be visibly different from its Japanese counterpart, much as the Rover 200 already differs from Honda's Civic Sedan.

At San Diego, Nissan Design International, originally represented by one former GM designer, is now fully staffed and creating vehicle designs entirely independent of Nissan in Jopan. Where volume permits, these designs could be put into production.

This trend offers the greatest potential for the top executive/luxury sector of North America and European markets in particular. Nissan's 300C has largely been styled to suit Japanese and Middle Eastern tastes. The latest replacement for the Laurel model also falls short of European preferences. Outside Japan, the Mazda 929 has had a poor sales record while the 626 model, with a strong West German flavour, has achieved notable success in export markets.

In this drive for innovation, Japanese producers are buying in Western expertise or drawing on cooperative ventures to supplement their own R&D programmes. The influence of Italian design can be seen in products as diverse as Mazda's 626 and Honda's City Cabrio.

Fuji (Subaru) has taken out a licence from Van Doorne Transmissie to build its own version of the steel belt continuously variable transmission system. Toyota bas improved suspension systems through its link up with Lotus, and Honda is learning a lot about Japan's weakest sector, the market for executive saloons, through its joint XX project with Austin Rover.

Nor is this traffic one way. Mitsubishi's "silent shaft" principle has been incorporated in Porsche's 2.5 litre engine for the 944 model following a patent licence signed in 1979.

Further areas of cooperation include turbochargers, braking systems and vehicle suspension. Mitsubishi is interested in Porsche's work on lightweight materials and engine development. There was also a move, at one stage, to have Volkswagen assemble Nissan's Prairie at e factory in West Germany.

Where Japan has been slower to incorporate advanced concepts in aerodynamics and internal space efficiency techniques in its production vehicles, particularly rapid strides have been made in ceramics, weight reduction, electronics and active ride control systems. Japanese companies such as Kyoto Ceramic, NGK, and Isuzu, lead the world in ceramics research.

In 1981, Isuzu incorporated a ceramic glow plug in the engina of its Gemini model. Two years later, a ceramic hot plug appeared, and now an adiabatic engine (able to operate without cooling) with major components made from ceramics is being tested at Isuzu's Fujisewa plant.

A lean combustion technique for petrol engines has been incorporated in Toyota's 1.6 litre Carina for the Japanese market. In this design, completeness of combustion is measured using a new design of ceramic sensor in the exhaust manifold. Fuel efficiency improvements averaging 20 per cent are claimed.

To reduce weight, Honda has recently perfected a fibre-reinforced metal (FRM) conrod — equal in strength but 30 per cent lighter than conventional conrods. Improvements in economy and power output result.

The new conrods are expected to appear first in o slighty revised version of Honda's City (Jazz) due in July. Already, some 40 per cent of the body panels on Honda's CRX coupe are plastic, with "Honda Polymer Alloy" used for the front panel, front wings and the large side mouldings.

In co-operation with NHK Spring, Nissan has developed FRP leaf springs with an 80 per cent reduction in weight. These are to be incorporated in light trucks later this year.

Mazda is moving to incorporate new materials in car bodies. On the MX-02 concept car, all the body panels are made from carbon fibre reinforced plastic — lighter than steel with good shock-absorbent properties, and totally non-corrosive.

Currently, Mazda is looking at the use of plastics for the floor plan, doors, tailgate, fual tank, wing and bonnet panels of its cars.

Nylon cylinder head covers and intake manifolds are being looked et along with plastics for the drive shaft, gear shift cover, pistons and oil sump. Nissan's experimenetal NRV-2 vehicle features plastic windows and wheels.

Introduced four years ago, Toyota's Soarer (Celica Supra) was the world's first production car to feature an all-electronic dashboard. Now a revised version has been fitted with a six-inch colour cathode ray tube (CRT) in the instrument display.

Other electronic innovations from Toyota centre on computerised navigation systems, voice synthesis warning facilities, electronic skid control and microcomputer-controlled automatic transmission.

Nissan too has laid a heavy emphasis on electronics. Major developments recently include four-wheel anti-lock brakes, automatic windshield wipers, a keyless entry system, voice-actuated power windows and a plasma spark ignition system.

Meanwhile, Mazda's four-steering system is being road-proven on a midified 626 model; Honda is readying its own version of a similar system; several four-wheel drive performance variants are being prepared and Subaru has broken new ground with automatic selection of two/four-wheel drive functions and a record 0.29 Cd ratio for its latest XT sports.

However, with the advent of these high-tech, added-value vehicles from Japan, have come problems at a different level: attempts to break new price barriers have met resistanca by customers concerned over heavy depreciation rates compared with prestige rivals, notably from West Germany.

In this new sector, perceived image and the skill of the marketing effort must now match the technological excellence of Jspan's latest products.

Efforts focus on curbing exhaust emissions

Engines

JOHN GRIFFITHS

THE concerted drive to improve engine technology, spurred initially by the first of the oil crises, has taken on a significant extra dimension.

Whereas the first thrust was to improve fuel consumption in the face of large fuel price rises which, it seemed at the time, would continue to climb inexorably, the current main focus of concern has become how to reduce the emission of pollutants.

The success already achieved by the world's motor industry in terms of improving fuel economy was highlighted last month in a report from the International Energy Agency, whose 21 members include all the world's major vehicle-producing countries. Despite an increase of more than one-third in the number of vehicles on IEA member countries' roads between 1972-82, the consumption of vehicle fuels actually fell by over 4 per cent, the report disclosed.

However, with the current oil glut, the IEA was moved to express concern that the impetus to make further progress appeared to be diminishing—at least partly as the result of consumers once more showing e preference for larger, higher-performing cars.

The industry is trying to maintain the impetus—but is now having to fight on two fronts. The West German government, alarmed at the rate at which the trees of the Black Forest are dying—and suspecting, though there is no definite proof, that nitrogen oxides emissions from car exhausts are the culprit—has decreed that U.S.-style catalytic converts to remove such emissions will be mandatory on new cars, starting with over 2-litre models in 1987.

Political difficulties created with its EEC partners aside, the "cats" create a number of problems.

They need to run on lead-free fuel, as lead can destroy a catalyser within a few hundred miles. No real problems here—the industry accepts that lead is an undesirable pollutant in itself, and has been able to adapt at relatively little cost engines to run on the lead-free fuel which is to be freely available in Europe from 1989 onwards.

But catalytic converters run directly counter to attempts to improve fuel economy: they sap power, are heavy and complex; in short, they would wipe out all the gains made by European producers in fuel economy over the past five years and threaten those still in the pipeline.

In addition, they have proved far from perfect in use—recent tests in the U.S. showed one-third to be operating below standard after six months' use. And there is concern that the defect rate would be higher in European use, given that average speeds are considerably faster than in the strictly-controlled 55-mph-limited U.S.

Manufacturers are convinced that "lean-burn" engine designs offer a better alternative, since they should enhance fuel economy at the same time as reducing emissions to an acceptable level. The trouble is, the industry needs time to develop them fully, and being already strapped for cash, can ill-afford to develop "cats" and lean-burn engines in parallel while the EEC's politicians are deciding which way finally to jump.

Significant

Catalysers are likely to add £400-£500 a unit to car costs, points out Mr Harry Sheron, managing director of BL Technology, currently engaged in extensive lean-burn research in its emissions laboratories at Gaydon, near Warwick. While the extra might not matter too much on executive and luxury cars, it would add significantly to prices of smaller, volume-produced cars and provides the reason why the catalyser route is opposed particularly by the industries of Italy, France and the UK, where smaller cars loom large in overall production.

In contrast, given enough time and resources for intensive development, it is likely that lean-burn engines, involving primarily work on cylinder heads, could be produced at an on-cost of just £20 a unit, according to Mr Sheron.

Typically, cars in the past have run on air/fuel ratios of 13-16:1, with an associated high level of nitrogen oxides emissions. But BLT is observing "a plunge down the 'NoX' scale," according to Dr Mark Barnard, chief engineer, advanced products and technology, in the most pollution-prone area of initial acceleration on prototype engines, running on ratios around 18-20:1. Ratios averaging 21-22 should be feasible, he points out. The air/fuel ratio is not the sole determinant of the level of nitrogen oxides emissions. But in conjunction with further advances in electronic engine management, and new materials such as ceramics in the combustion chamber area to promote higher efficiency a lean burn unit capable of matching tha "cats" is feasible, he argues.

So how far away is an acceptable lean-burn alternative? Mr Sheron points out that Europe would need an adaptation programme for engines already in production as well as completely new ones. But depending on the opportunities and funds available to each manufacturer, "it could take three to seven years." That, however, would be in a climate free of the uncertainties created by the Bonn government's catalyser plans. "Our dilemme is that we've got the technology; we'd like to do both new and edapted engines; but what's the point if the West Germans get their way on catalysts?"

Emissions reduction, like improved fuel economy, has required action on a broad technology front, involving not least sophisticated usage of electronics, the introduction of new materials and advances in engine design itself.

Ford, for one, demonstrated recently that volume-produced cars are benefitting from the technology as much as those with pronounced "hi-tech" profile such as BMW and Mercedes.

Its new 1.8 litre engine for the Sierra announced in October incorporated a "fast-burn" concept, using a cylinder head design promoting rapid fuel "mixture swirl" and hence allowing an air/fuel ratio spread between 15:1 and 21:1, depending on load and engine speed. This was allied to an electronic management system with microprocessor control of ignition timing based on a three-dimensional engine "map" with 256 calibration points related to engine load and speed.

The Ford's microprocessor includes two other notable features: a temperature compensation programme altering the ignition timing for maximum efficiency at low temperatures, and control of an inlet manifold heater which warms incoming air to the engine, allowing the automatic choke to be switched off at the earliest possible opportunity.

Europe has yet to have the opportunity to assess fully a "lean-burn" system developed by Toyota. It uses a ceramic sensor monitoring oxygen in the exhaust, linked to a swirl control valve and computer-controlled independent fuel injection to each cylinder, to burn very lean mixtures of up to 23:1. The independent injection is claimed to overcome the problem of unstable combustion when very lean mixtures are used, and an engine incorporating the system is already on sale in the Carina saloon in Japan.

But while a 20 per cent improvement in fuel economy is claimed, no statistics on pollutant emissions have been given.

An innovation which should make control of the ignition process even more precise was announced at the beginning of this year by Saab Scania and provides the opportunity to do away with the vulnerable-to-malfunction distributor and high tension leeds. The "SDI" (Saab Direct Injection) is seen as offering e route to more power, greater fuel economy and less sensitivity to variations in fuel quality.

Conventional inductive ignition systems take a relatively slow 20 millionths of a second to build up the 25,000 volts which jump the spark plug gap—long enough for "leakage" to take place at any weak points in the distributor/HT lead assembly. The capacitative Saab system uses a coil for each spark plug and provides 40,000 volts in about one millionth of a second.

Pulses

Ignition pulses are controlled by a microprocessor - linked sensor mounted on the camshaft, with the microprocessor programmed to provide accurate firing for all operating conditions. The entire system is enclosed within a single metal cartridge which fits on to the spark plugs much like a one-piece battery cover, thus eliminating all conventional high tension wiring.

Developments like the above are moving the industry further towards what is seen as the "ultimate" method of propelling a car—at least one using oil-based fuels. This involves, however, complete computer management not only of the engine, but the transmission as well. The ideal, in terms of efficiency at least, is to have the engine mated to a continuously variable transmission. The latter would change the vehicle's speed while allowing tha engine to operate within the fairly narrow revolutions band at which it is most efficient.

Until the middle of last year, it was thought that the first lightweight, fully competitive CVT was on the point of becoming available through Van Doorne Transmissie, the Dutch-based transmission manufacturer which with several partners has been the focus of CVT development for virtually the entire industry.

First technical problems with the manufacture of the steel belts driving the transmission, and more recently financial problems at VDT, have delayed its arrival—possibly until later this year. Full electronic management, however, remains a longer-term goal, unlikely to be seen on a production vehicle until the late 1980s at least.

Technical problems apart, consumer reaction is mostly unknown. Ordinary automatic transmissions are not much liked by Europeans, possibly because conventional ones produce poorer performance than a manual transmission and use more fuel (though advances like torque converter lock-ups have largely overcome the latter).

Whether motorists will be prepared to see what many regard as an enjoyable part of driving, using a manual gearbox, disappear in fevour of a constant-speed drone from the engine departments, is another matter. . . .

BL Technology's ECV-3 concept car: a project that explores the "revolution" in car manufacturing technology forecast by BL's Harold Musgrove.

Dangers of automation

CONTINUED FROM PAGE 4

such as developments in ceramics and other new materials, and electronic-based items such as computerised engine management.

Despite these examples of innovation, leading engineers and designers in the European industry feel, almost certainly with some justification, that the Japanese industry is not quite there yet; that it is still trailing the Europeans in the more arcane arts and sciences of vehicle styling; packaging for optimum space, suspension design, handling and so on which make, for example, BMWs, Mercedes and Europe's "hot hatchbacks" like the Volkswagen Golf GTi such sought-after products.

Any complacency about this scenario is misplaced. They are deficiencies of which the Japanese are well aware, and are taking action on two principal fronts to rectify. The first is by the time-honoured Japanese technique of buying in the know-how.

There is no better example than that provided by Toyota and Lotus. The Norfolk-based specialist car producer, under the collaboration deal signed several years ago, which will also see Toyota drivetrains used in Lotus's new X100 sports car (Toyota also has a 17 per cent stake in the company), is carrying out most of tha development work on bringing Toyota suspension systems up to best European standards.

Toyota has already seen the benefit on its Supra sports coupe, the improvements wrought by Lotus being widely acclaimed by the European motoring press last year. Further concrete results will follow.

Second, on the styling front, Japanese producers are turning increasingly to the design houses of Italy such as Pininfarina and Ital Design.

In short, as Mr Tom Karen, head of the UK consultancy, Ogle Design, points out: "The Japanese actively scavenge for good ideas—from the U.S., Europe or anywhere."

"Japan Inc", however, is noted for its long-term strategic thinking and policies, and it is hardly to be expected that it would remain content merely to buy in expertise.

Phase

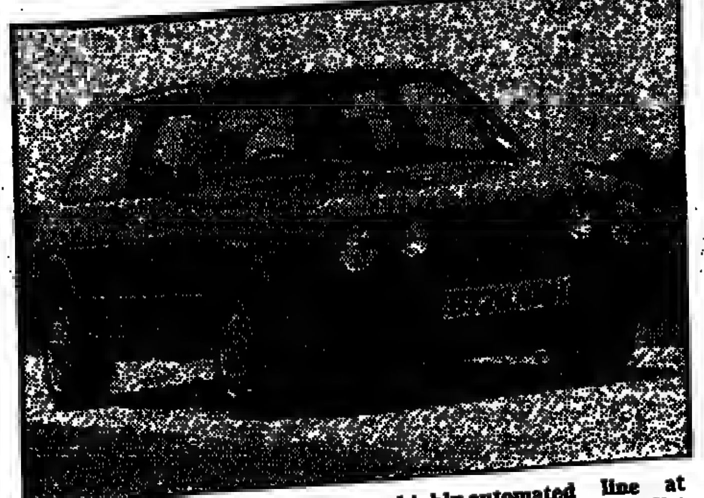
So in Europe it is already moving on to the next phase. Honda's collaboration with Austin Rover, and its longer-term plans to set up production in the UK as a sourcing site for European sales unrestricted by quotas, provides another good example.

Now, however, Honda has taken the key step of setting up its own research and development facility, based at Ockenbach, West Germany. It will fulfil the same function as that already being undertaken by a similar unit based in California.

"It is to educate Honda right in the European heartland, about European design trends, tastes and standards, about which they realise they are not truly aware," Mr Jones says.

"What they will do in West Germany is what they have done in California and build up their own expertise applicable to tha two discrete markets."

When these final pieces of strategy fall into place, there is no reason to think that the Japanese industry will not be fully capable of taking on the European industry in any sector it chooses.



Volkswagen's Golf GTI: the highly-automated line at Wolfsburg raises questions of its flexibility if specialist markets are to be pursued.

Pressure to come up with new products is forcing suppliers to carry bigger risks themselves

Vehicle makers demand new thinking

Independent suppliers

LORNE BARLING

ADVANCED vehicle design techniques have changed the nature of the components industry in recent years, increascreasing the requirement for research and development by component manufacturers themselves.

In many ways this has favoured large companies such as Lucas and GKN in Britain and the major Continental suppliers such as Bosch, which have the resources to develop new products and materials over long periods.

However, there have also been opportunities for smaller concerns to concentrate on very specialised areas of component supply, since the ranges of technologies being used can no longer be covered entirely by even the largest companies

The components industry has been under considerable pressure from the motor industry to produce cheaper, lighter and more durable products which, when fitted, will make the end product — the completed vehicles — more competitive in world markets.

The major manufacturers, such as Ford and General Motors, have themselves invested heavily in new computer-aided design and engineering techniques, and component suppliers work increasingly closely with them to ensure that compatibility is achieved.

In addition, there has been a trend towards greater integration of functions within a single component, reducing assembly costs and creating improved reliability. The use of computers in component development has allowed much faster development times, particularly in the durability testing phase, where operating conditions can be simulated.

These changes have taken place during a difficult time for the British component industry, which has seen its home market significantly reduced as a result of lower output of vehicles, and foreign competition.

These problems have created a sense of urgency in the search for more efficient products, and in the way they are manufactured. Widespread redundancies in the industry have now given way to an increase in investment in up-dated manufacturing equipment.

According to Mr Harry Hooper, chairman of Armstrong Equipment and president of the Society of otor anufacturers and Traders, the component industry is also seeing some diversification, with new entrants such as electronics companies creating greater competition.

"It is now increasingly necessary for component manufacturers to spend money on research and development, and they are also doing more adaptive work on products in line with the requirements of the big motor companies," he says.

Product development now often takes place with R and D teams working alongside their opposite numbers in the motor companies, while material suppliers also have to work more closely to meet requirements.

Research

Smaller companies with strong capabilities were also playing an research and development important part, in spite of their smaller size. Although it may appear difficult for smaller concerns to compete against a company like GKN, it should be remembered Mr Hooper says, that GKN was widely diversified in its products, and opportunities therefore existed.

Mr Hooper believes that in spite of the difficult times for the UK industry, the outlook was now brighter than for some time. One of the main reasons for the problems has been the strength of the pound against European currencies, particularly the West German mark, he says.

This had led to more motor manufacturing abroad, but there were signs that this was changing. With the arrival of Nissan in the UK, talk of Honda setting up a manufacturing plant and Ford looking at increased UK output, prospects were improving.

Overall, there probably will also be greater collaboration between component manufacturers within Europe, as each becomes more expert within particular areas of technology. This is most likely to occur between some of the majors.

Increasing standardisation within Europe, such as on safety, emission controls and the general convergence of technology, is also expected to create greater opportunities for links between companies.

British component manufacturers face tough competition in this respect, but they are recognised to have achieved considerable improvements in efficiency in the last few years. As a result, their profitability has improved their ability to invest in the vital research and development work for the creation of new products.

Quinton Hazell, the Midlands-based components company which has in the past concentrated on the replacement market, has recently illustrated some of the trends within the industry by developing new products and moving into new sectors of the market.

The company decided in the late 1970s that it needed to widen its approach to the market, increasing the volume of output by supplying original equipment as well as replacement parts. In order to achieve this, it invested heavily in upgrading its process technology to ensure the quality of its products.

Invested

Quintin Hazell's main products now being sold as original equipment are steering parts, water pumps and clutches, and about £10m has been invested in improving production facilities in the last three years.

Mr Peter Redfern, director responsible for R and D says: "Water pumps may be relatively simple products, but we are specialists at making and designing them and you have to introduce new technology to win customers."

He points out that vehicle makers are demanding new thinking on products, which leads to better design, durability and performance. "If a customer can save £1 on a component that goes into 300,000 vehicles, it means a substantial amount of money," he says.

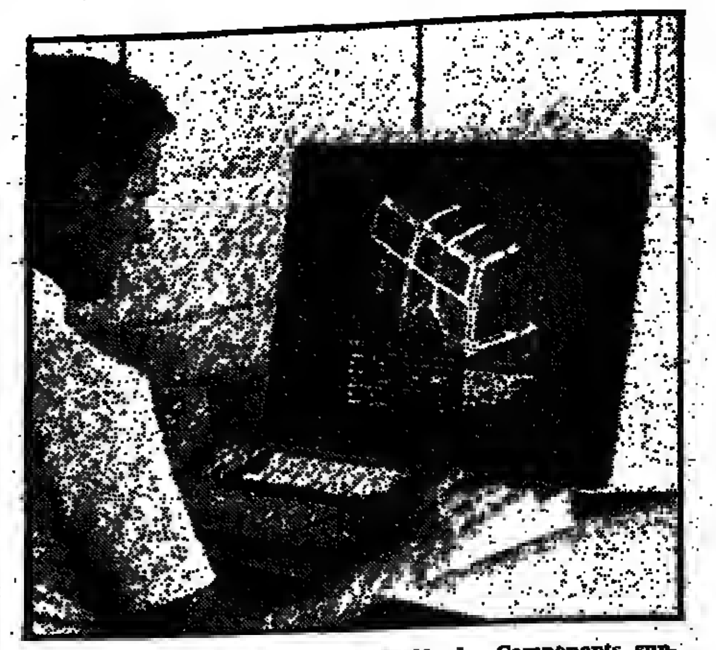
In the area of product development, Quinton Hazell recently produced a new type of shock absorber, which it describes as simpler and better than existing ones, containing only 25 per cent of the number of components commonly used in this components. In addition, it has a "variable performance" which allows each one to be suited to the characteristics of the vehicle it is used on.

"We have accepted that there are limited prospects for the growth of existing business, so we have had to move into new areas. This has meant looking at overseas markets and developing new products," Mr Redfern says.

Most of the company's component output remains in the replacement market, but the volume of original equipment is increasing fast. The largest of these is steering parts, followed by clutches, where demand has been increasing fast and Quinton Hazell's market share has been rising.

Also, a small electronics company has been acquired and is producing starter motors and alternators; and although this represents a very small part of its output, it is regarded as a promising venture.

Overall, the UK component industry is increasingly aware that it must take its own initiatives to create better products for customers, who for their part are no longer prepared to accept design and quality which is not of a progressively high standard.



Computer-aided design work at Bedford. Components suppliers now have to work to similar levels of sophistication in order to meet the demands of the vehicle builders.

Strong commitment to big-spending development

Components innovation

LORNE BARLING

THE DESIGN and development of revolutionary new motor components now demands a great deal of investment, perseverance and risk by Britain's larger motor component manufacturers.

Companies such as Lucas and GKN are major innovators in the field of motor components, and both now recognise that due to the cost of developing new technology and bringing the resulting product to the market, they must try to back only the winners. The problem, however, is choosing the winners out of many promising ideas.

GKN's approach has been to invest heavily in its subsidiary, GKN Technology, based at Wolverhampton. It was here that a specialist team developed the company's composite epoxy resin and glass fibre leaf truck spring, which is now going into production at a newly-built factory at Telford.

Dr Peter Watson, GKN general manager for product development, says that about £10m was spent on the development work for the spring, and a further £10m on the factory. Production will start in June or July this year and only then will the investment begin to be recovered.

"Component companies must now accept the commitment to produce products at their own risk. The days are gone when they could expect any funding," Dr Watson says, but adds that financial support for specific, short-term projects was often available.

"This kind of technology is now a big team game, and needs a lot of resources to be put together. It also takes a long time—it is not a Eureka situation where discoveries are made overnight."

The new composite spring, to be used on commercial vehicles, has attracted interest from Europe, the U.S. and Japan. It was well ahead of competitive products, now beginning to be developed by other companies in response to GKN's success.

The company recently increased the number of people working on composite materials, which GKN believes will have a wide application in the motor industry. This is expected to extend to car suspension systems, drive shafts and other transmission parts, and structural areas.

Encouraged

GKN is also encouraged by its work on the use of ceramic fibres to reinforce key areas of aluminium parts, such as pistons. This has been carried out over a considerable period, and the transition between product development and full production is now being examined.

Dr Watson believes that high-technology products can also be produced successfully in collaboration with smaller companies, and adds that GKN is constantly looking for concerns of that size with good ideas.

"Many small companies are not aware of the time scale and costs of developing a new component, and are generally far too optimistic. We believe we are now fairly good at making judgments of that kind, and therefore can be helpful," he said.

There is no shortage of talent within the UK engineering industry to produce new motor components, he suggests, but there is a need to bring together the universities, suppliers and the customers. "We have the technical resources to be highly successful in this area."

One of the Lucas Group's latest new products is a low-cost anti-lock braking system for front-wheel-drive vehicles. One constraint on systems of this kind has been the cost, which until now has restricted its use to larger vehicles.

Lucas set about breaking through this price barrier and developed its SCS stop control system, which was announced recently. It is designed for small and medium-sized cars equipped with diagonally split braking systems.

"For the first time, front-wheel-drive cars can be designed to include a braking control system with a price substantially lower than that of currently available electronic anti-lock systems," Lucas says.

The company claims that the system's key virtue is that the driver retains control over the vehicle under emergency braking, by maximising the available tyre-to-road adhesion while trying to avoid a danger. This could be achieved previously only by professionally-executed cadence braking.

Lucas was faced with a situation where the majority of small cars were equipped with diagonally split braking systems or "X-split" systems, and the SCS had to exploit their intrinsic safety aspects.

Separate

On the SCS system, two modulators are belt-driven directly from the drive shafts on either side of the engine transmission unit, and independently connected to the separate hydraulic lines of the diagonally-split brake circuit, thereby maintaining the circuit's functional integrity.

Each modulating unit comprises a sensor, dump valve, pump and de-boost piston, and controls not only the brake pressure of the adjacent front wheel but also, through the corresponding apportioning valve, the diagonally-opposite rear wheel.

The heart of the sensor is a *flywheel*, a device which has been tried before but unsuccessfully since it can only respond to accelerations and decelerations, and could not control the external power source well enough to prevent wheel lock under some conditions.

Lucas says that its modulator overcame this problem by using a common drive shaft for both the flywheel and the re-apply pump, one of the patented features of the system.

Lucas claims that as a result of extensive development and testing, when the system is fitted to a front-wheel-drive car it achieves the "major characteristics" expected of any anti-lock system, whether braking on a consistent road surface, on unequal adhesion, or when braking on a bend.

The potential benefits of the system are recognised to be considerable. Most drivers, when travelling along a straight road, will overbrake in an emergency, causing the front wheels, and probably the back wheels, to lock.

Stopping distance is then determined by the adhesion value of the locked wheels, and the greatest danger *is the* driver's inability to steer away from any obstruction. This situation is even more likely when the road surface is slippery or uneven.

Comparisons by Lucas between identical cars with and without the SCS system have shown that SCS stopping distances are shorter both for braking in a bend and lane change manoeuvres under emergency braking conditions. In addition, control of the vehicle is more easily maintained.

Lucas is now seeking the speedy establishment of realistic anti-lock performance criteria to provide a sound basis for the promotion of anti-lock by the motor industry.

"Accident avoidance is the key point and in terms of price performance, SCS makes valuable and significant safety features available to the average driver, at an affordable cost relative to the price paid for the car," the company says.